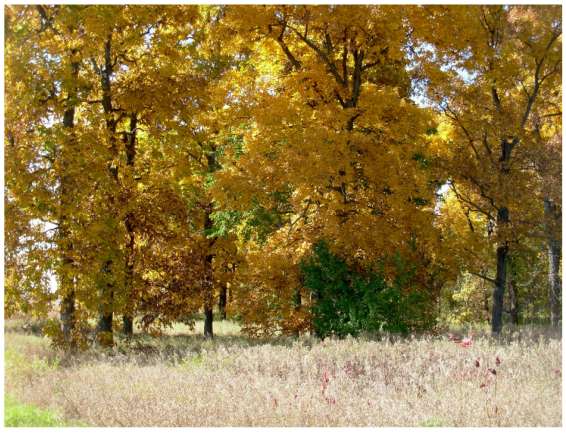

Dorothy Carnes County Park & Rose Lake State Natural Area Master Plan

October 2009

Prepared for:
Jefferson County Parks Committee

LANDESIGN
by
Margaret Burlingham, llc

Acknowledgements

A grateful thank you goes out to all the participants in the Dorothy Carnes County Park and Rose Lake State Natural Area master planning process; those listed below and the public who participated in the process.

Many individuals gave hours of their time and their special talents brainstorming and compromising to create a plan that protects the special places around Rose Lake marsh and encourages visitors to hike, bike, learn and relax in the park while waterfowl, wildlife, and their habitats are protected and improved.

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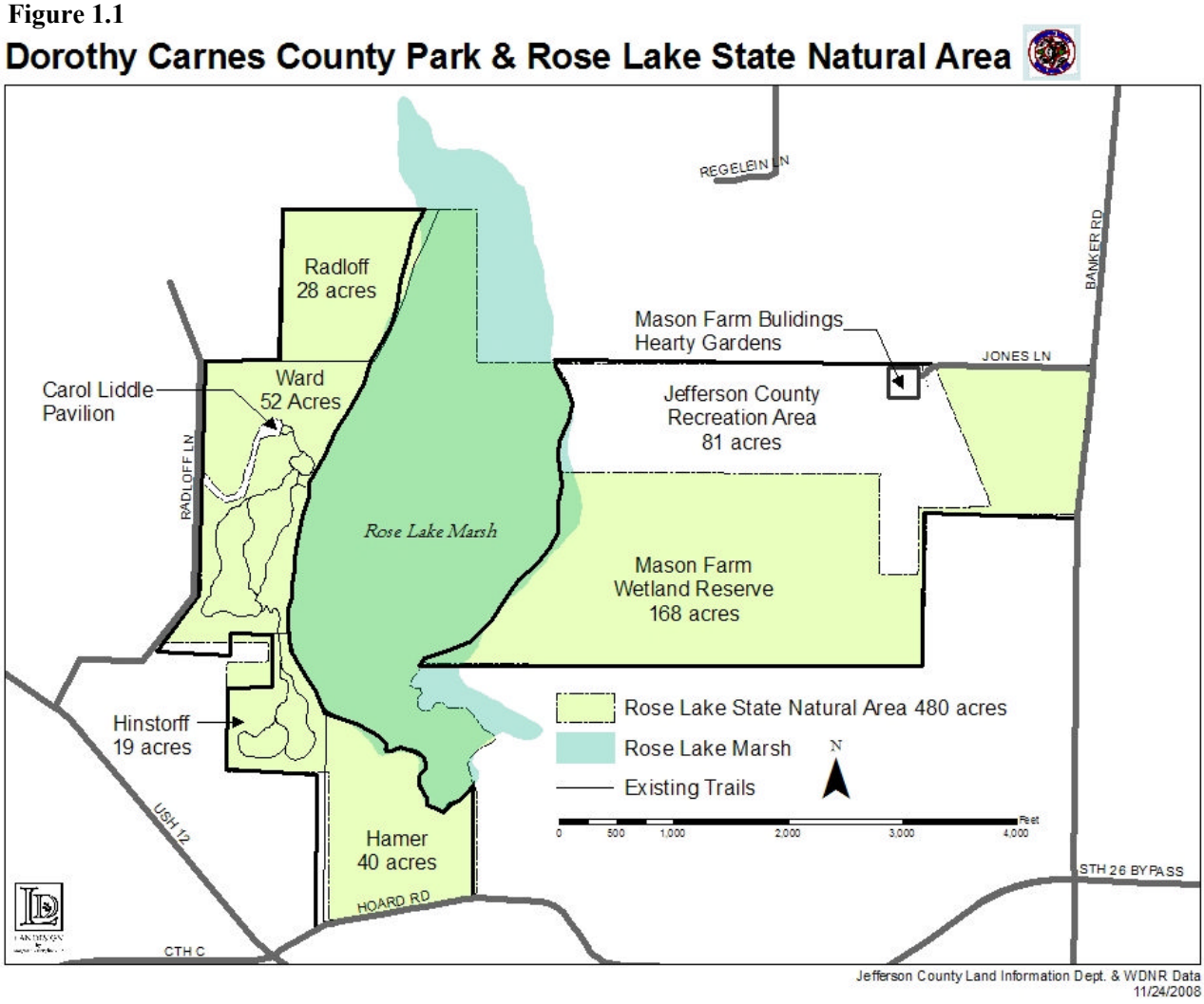
Table of Contents

Chapter 1 Park History and Prior Planning

The land of Dorothy Carnes County Park (394 acres) plays a part in the history of Jefferson County from the time Native American civilizations lived and hunted here, to the early settlers who began farming this region, and now as a public park that gives visitors the opportunity to experience prairies, marshes, and savannas that once covered our county, and the cultural history of the people who lived here. This chapter reviews past park planning studies and what is known about the history of the land.

Figure 1.1



1.1 Park History

Dorothy Carnes County Park was purchased over a number of years from several landowners:

- 2000 Ward Parcel, 58 acres
- 2001 Historff Parcel, 19 acres
- 2003 Hamer Parcel, 40 acres
- 2005 Mason Farm Parcel (Elk Farm), 249 acres
- 2007 Radloff Parcel, 28 acres

The partnerships that evolved around the acquisition of Dorothy Carnes County Park and Rose Lake State Natural Area were the key to its establishment. Numerous grants, financial and in-kind donations, volunteers, and local, state, and federal programs and organizations have enabled Jefferson County to acquire, develop and maintain Dorothy Carnes County Park in an unprecedented fashion. The partners to date in the park include:

- Carol Liddle and the Carol Liddle Estate
- Wisconsin State Stewardship Fund
- Wisconsin Department of Natural Resources Fish and Wildlife Grants
- Wisconsin Department of Natural Resources Urban Greenspace Grants
- Wisconsin Department of Natural Resources Bureau of Endangered Resources
- North American Wetlands Conservation Act Small Grant – U.S Fish and Wildlife Service
- Madison Audubon Society
- Friends of Rose Lake
- Friends of Korth Park
- Ho-Chunk Nation
- Town of Jefferson
- Jefferson County Land Trust
- Ducks Unlimited
- Fort Wisconservation Club
- Fort Atkinson Area Community Foundation
- Fort Atkinson Project Lead
- Heart of the City
- Jefferson County Land & Water Conservation Department
- USDA Natural Resources Conservation Department Wetland Reserve Program
- Jefferson County Historical Sites Commission
- Public Safety Volunteers
- Numerous volunteers

Native American Presence

A turtle effigy mound graces highest hill on the west side of Rose Lake Marsh. Jefferson County, especially the areas around the Rock and Crawfish Rivers and Lake Koshkonong, is known for the concentration of Native American mounds and village sites found here.

An archaeological survey of the original parcel (Ward) of Dorothy Carnes County Park was conducted in August 2001 by Archaeological Consulting and Services, Inc. The survey found the following Native American artifacts: a late Early Woodland projectile point (500 BC – 100 AD), a Middle Woodland corner notched point (100 BC – 500 AD), a chert flake, and a scraper. A 19th century building foundation was also found on the edge of the woods in the center of the Ward parcel. The Radloff parcel is a Middle Woodland habitation site.

The University of Wisconsin-Milwaukee Archaeological Research Laboratory documented two mounds in the park. The turtle mound is found along the trail toward the south end of the Ward parcel at the high point overlooking Rose Lake marsh. The other mound is a linear mound on the west edge of the woods near the center of the Ward parcel. There is some question whether the linear mound is of Native American origin and excavation would be needed for a final determination. The archaeological survey recommends cataloguing and protecting the mounds and maintaining a 5 foot buffer around the mounds where no disturbance is allowed.

Jefferson County has developed management plans for the mounds within the County Parks with assistance of the Ho-Chunk Nation and the Burial Sites Preservation Office of the Wisconsin Historical Society.

Settlement *(Based on research by Bill Ward and Julia Ince)*
Rose Lake is named after the family of Henry Rose, who received a grant for land from the U.S. Government around 1839 and was personally acquainted with Chief Black Hawk who often stopped at their homestead. Henry's son William served in the Civil War and was a familiar figure around Fort Atkinson until he died in 1924 at the age of 98. Several decedents of the Rose Family live in the area today.

The land along Banker Road that would become the Mason Farm was originally surveyed in 1836 by the U.S. Government. Jeremiah Mason was born in 1838 and came to Fort Atkinson in 1847 from Oneida Falls, New York. His older siblings may have arrived in Jefferson County in the spring of 1837. Lois Mason, Jeremiah's mother, purchased 115 acres in 1850 that became the Mason Farm. This is significant because married women were not allowed to own land at that time, though the law changed shortly thereafter.

Jeremiah's father, Elias purchased an additional 41 acres in 1854. The 14'x20' log cabin, part of which survives within the farmhouse, probably dates from between 1850 and 1854. Elias died in 1858 and Jeremiah apparently took over the farm. Jeremiah started keeping a daily diary of life on the farm on January 1, 1861. Farming was done by horse and oxen and neighboring farmers shared equipment and work animals. Jeremiah talks about raising cattle, oats, hogs, winter wheat, sheep, corn, potatoes, apples, currents, pumpkins, beets, cabbage, and buckwheat, splitting wood, and grading the road. Jeremiah's brother Elias fought in the Civil War. Jeremiah Mason married Julia Beach in 1866 and they moved to Fort Atkinson in 1868. He was elected Mayor of Fort Atkinson in 1887. Their son George was the Fort Atkinson police chief for many years in the 1920's and decedents live in the area today.


Mason Farm Buildings

Today the farmstead consists of more than ten buildings built over the course of a century. It appears the barn with its fieldstone foundation was built in the mid 1800's with several additions later. Prairie Lights Architecture conducted a survey of the farmstead buildings and their condition and provided a cost estimate to restore the house and barn for viewing purposes made some historical observations. The farm housed Tony Barber's elk herd in the early 2000's and is locally known as "the elk farm".

1.2 Prior Park Planning

Dorothy Carnes County Park was initially identified as a potential park site in the 1998 Jefferson County Park Site Feasibility Study. The following section briefly summarizes the planning efforts that influenced the acquisition and design of the park.

Dorothy Carnes County Park Master Plan, 2001
The master plan for the 52 acre parcel purchased from Marie Ward set the tone for park developments to follow. A vision statement guides design implementation. This plan called for 1.5-miles of hiking and skiing trails to three overlooks, four ecological and cultural interpretive areas, one Indian Mound, over a bridge, and to several strategically placed seating areas. Prairie and savanna restoration programs were implemented for the first time by the Jefferson County Parks Department at Carnes County Park.

Master Plan Goals

- Preserve, protect and/or restore the rich cultural and natural resources.
- Provide year round passive recreation and public access.
- Encourage public education and involvement opportunities in ecology, environmental science, natural resources protection, native plant community restoration, local history, and other appropriate fields.
- Involve the communities and citizens of Jefferson County in park creation and improvements.

Jefferson County Parks, Recreation, and Open Space Plan 2005-2010
The 2005 *Jefferson County Parks, Recreation, and Open Space Plan* identifies countywide recreational needs and new opportunities, guides the development of outdoor recreational facilities, identifies potential park acquisition areas, and qualifies the Parks Department for federal, state, and local grants and funding.

> *The mission of the Jefferson County Parks Department is to preserve natural resources for public use and conservation, to operate and maintain a parks system with resource-oriented recreation, trails, and specialty parks; and to expand the parks system for environmental and land use benefits and the health and enjoyment of Jefferson County residents.*

The following values express the core beliefs of the Parks Department:

- Pride in our accomplishments.
- Respect by and for others.
- Reputation for excellence.
- Teamwork to reach goals.

The visions that arose during the comprehensive plan process express what the Parks Department and System will look like and provide.

Vision I: Jefferson County Parks provide multiple recreational facilities and activities for all ages and abilities in a way that balances recreation and conservation values.

Vision II: Jefferson County continues to acquire unique recreational lands and natural resource areas for public use.

Vision III: Jefferson County's system of large parks, extensive trails, and natural areas gives form to our community and rural landscapes. As part of this landscape, the Parks System is fundamental in creating special places to live with nature-based rural character, vital and distinctive communities, and working farms.

Vision IV: Jefferson County sustains a high standard in the design, construction, accessibility, maintenance, safety, and management of the Parks.
Vision V: Jefferson County promotes an awareness of parks and the benefits of outdoor recreation and preservation of natural resources.

Recommendations for Dorothy Carnes County Park listed in the comprehensive plan are:

- Continue implementation of the master plan with installation of tree house (completed) and marsh overlook structures.
- Continue land acquisition program.
- Install informational and educational signage and complete trail marking.
- Install electric outlets in shelter.
- Continue removal of invasive species from woods and monitor prairie restoration.
- Master plan for the Hamer and Hinstorff additions – completed.
- Install small playground in appropriate location.

Jefferson County Park Site Feasibility Study, 1998

The Feasibility Study identified thirty-five potential new park areas and developed a decision making matrix and rating system for park site selection. Dorothy Carnes County Park, Korth County Park, and the Holtzheuter farm, three of the top ten sites, have been acquired for use as County Parks.

Jefferson County Agricultural Preservation and Land Use Plan, 1999

The *Agricultural Preservation and Land Use Plan* provides a vision and guidelines for growth, development, and land preservation with an emphasis on preserving the agricultural lands in Jefferson County. All County parks are considered part of the environmental corridor. These corridors often have significant natural resources, rugged topography, good views, and potential park sites. The environmental corridor goals in the plan that are applicable to park planning include:

- Protect and preserve an environmental corridor system consisting of wetlands, floodplains, and steeply sloped glacial features.
- Protect groundwater and surface water quality.
- Discourage development in areas that possess valuable natural resource characteristics and wildlife habitats.

Jefferson County Bikeway/Pedestrianway Plan, 1996

The Bikeway/Pedestrianway Plan is currently being updated. The original plan set forth methods to increase bicycle and pedestrian modes of travel, to improve user safety, and identified bicycle and pedestrian routes and recommended links between communities.

The Jefferson County Bicycle Map identifies a bicycle route between Fort Atkinson and Cambridge utilizing Banker Road, which travels past the Mason Farm portion of Dorothy Carnes County Park.

Glacial Heritage Area Feasibility Study, Master Plan, and Environmental Impact Statement, 2009

The Glacial Heritage Area will facilitate the protection and management of four landscape resources: conservation parks, linking trails, river corridors, and wildlife and natural areas in most of western and southern Jefferson County, eastern Dane County, southern Dodge County, and northern Rock County.

The GHA project proposes to:

- Expand 5 existing parks and establish 7 new parks
- Establish 100 miles of trails linking the parks and cities and villages
- Protect pockets of land along major rivers and streams for boat access sites and to protect important habitat areas

- Expand 11 State Wildlife Areas and buffer them with Rural Landscape Protection Areas
- Establish the Crawfish Prairie Habitat Area

The WDNR Glacial Heritage Area plan identifies Dorothy Carnes County Park as a "conservation park" and recommends expansion of the existing park to protect the remaining shoreline and to provide a wider range of recreational activities including a 4 to 6 mile trail around the marsh. The potential project area for Carnes County Park in the Glacial Heritage Area Master Plan is 1,700 acres with an acquisition goal of 1,000 acres.

Glacial Heritage Area Vision
Create a coordinated network of places and corridors that enables and encourages a variety of compatible and sustainable outdoor recreation uses; preserves, restores, and protects significant habitats; benefits and integrates with local economic growth and farmland protection efforts; enhances the quality of life by maintaining and improving the land and water resources that underpin the economy; and helps residents and visitors maintain a strong connection to the natural world.

Goals for the Glacial Heritage Area include:
- ❖ Create exceptional outdoor recreation opportunities for residents and visitors.
- ❖ Preserve wildlife and water resources.
- ❖ Complement the voluntary protection of working farms.
- ❖ Combine ecology and economics to improve resident's quality of life.
- ❖ Work collaboratively across jurisdictions.

2005-2010 Wisconsin Statewide Comprehensive Outdoor Recreation Plan (SCORP)
The Wisconsin Department of Natural Resources has prepared a 5-year statewide recreation plan that identifies essential issues that affect the future of outdoor recreation and makes appropriate recommendations. Dorothy Carnes County Park is located in the Southern Gateways region for this report, which includes Dodge, Jefferson, Rock, Green, Dane, Columbia, Sauk, Lafayette, Richland, and Iowa Counties.

Wisconsinites participate in recreation at a higher rate than most other areas of the country. SCORP identified the most popular recreational activities for Wisconsin residents. Most of these popular activities are or could be provided at Dorothy Carnes County Park. Those activities are starred (*) below.

The top fifteen Wisconsin recreational activities by percent participating, age 16 and over:
- *Walking for pleasure 86%
- *Family gathering 79%
- *View/photograph natural scenery 68%
- *Gardening or landscaping for pleasure 65%
- *Visit nature centers, etc. 65%
- *Driving for pleasure 60%
- *View/photograph wildlife 57%
- Attend outdoor sports events 57%
- *Picnicking 57%
- *Sightseeing 55%
- *View/photograph wildflowers, trees, etc. 50%
- *Bicycling 49%
- Visit a beach 47%
- Swimming in lakes, streams, etc. 46%
- *Visit historic sites 45%

SCORP highlights bird watching as an activity that is popular across all age groups and state regions and estimates that over 40 percent of all Wisconsinites, 1,700,000 people, bird watch, most within 1 mile of their home (85percent). Birdwatchers value this serene pursuit in a natural setting and also the educational aspect of the activity. Also our population ages, participation in more active recreational pursuits decreases and participation in wildlife viewing increases.

Visits to wilderness areas are the most popular nature-based activity in Wisconsin, enjoyed b 38.3 percent of Wisconsinites. Nature-based activities occur in undeveloped settings with limited facilities. Day hiking, camping, and visiting a farm or agricultural settings are also among the most popular with over 30 percent participation. Dorothy Carnes County Park and Rose Lake State Natural Area can provide many of the most popular forms of recreation to visitors.

CHAPTER 2 PUBLIC PARTICIPATION

The Jefferson County Parks Department has a history of including the public in designing its parks. The Dorothy Carnes County Park and Rose Lake State Natural Area Master Plan was guided by a diverse Steering Committee. The public was invited to two input meetings and a park walk. Several articles on the park and public meetings were run in the local papers and the master planning process was discussed on WFAW radio.

The Master Plan was approved by the Jefferson County Parks Committee on August 3, 2009 and by the Jefferson County Board of Supervisors on……

This chapter summarizes the activities of the Steering Committee and the two public input meetings.

Second public input meeting.

2.1 Steering Committee

The Steering Committee for the master plan had 23 members representing County, Town, and City government, Jefferson County Parks, WDNR, Natural Resources Conservation Service, U.S. Fish and Wildlife Service, Madison Audubon Society, Jefferson County Bicycle Club, Friends of Rose Lake, Heart of the City, Jefferson County Tourism Board, economic development, and park neighbors. Steering Committee members are listed in the Acknowledgements. About nine members consistently attended meetings and several more commented regularly by e-mail. Steering Committee members actively attended the public meetings and championed the park.

The Steering Committee participated in a tour of the park, considered and analyzed public input, and balanced recreational and ecological interests in recommending a master plan to the Jefferson County Parks Committee.

2.2 Public Participation

Two public input meetings and a park walk were held during the planning process. Dorothy Carnes County Park is fairly large and at the time of the meetings trails had not been developed throughout all of it. High water conditions also prevented the public from enjoying the entire park. The public meetings included slide shows of the park so that the public, and the Steering Committee, could get a sense of the entire area.

The first public meeting on December 2, 2008 included a slide show of the park, information about the Rose Lake State Natural Area designation and Wetland Reserve Program, and a visioning exercise. About 40 people attended the event.

The group that attended the meeting lives primarily in the Fort Atkinson area and very much appreciated the park for its natural resources. Most of the meeting attendees saw the park as a quiet natural area for very low impact use that does not disturb the birds and wildlife. Observing nature was the preferred form of recreation for many of the attendees. Many ideas were received for the Mason Farm buildings as an

activity hub and there is a desire to expand the Hearty Gardens. Seventeen comment forms were received. Figure 2.1 charts the responses to 29 possible activities.

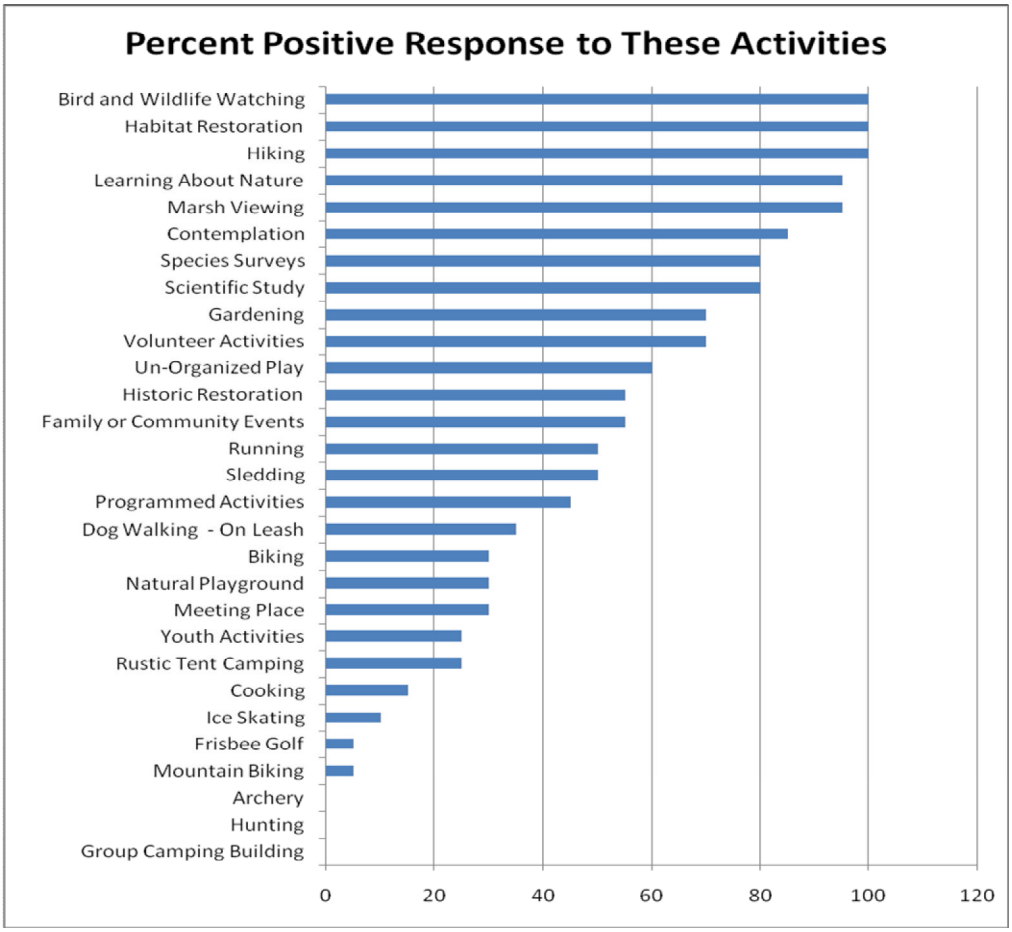
The following activities and facilities had a 100% favorable response:

- Hiking
- Bird and wildlife watching
- Habitat restoration
- Trail loops for long and short walks.

The following activities and facilities had between 80% and 100% favorable responses:

- Mosaic of plant life
- Rich in bird life
- Learning about nature
- Marsh viewing
- Contemplation
- Species surveys
- Scientific study
- Mowed trails
- Interpretive signs
- Tree and plant identification

Figure 2.1



The second public meeting was held on May 18, 2009 where the public responded to two design options and were asked to rank different road and shelter options. A park walk on the Mason Farm was held following the Friends of Rose Lake bird walk on May 23. Fifteen comment sheets were received two people attended the walk on a rainy Saturday. The bird walkers also received information about the park design process.

Through discussing and questionnaire responses the public indicated that at the park they value the following:

- Birds
- Marsh
- Immersion in Nature
- Quiet
- Views without human contrivances
- Farmstead memories and experiences
- Hearty Gardens

The public seemed to agree with the design for the west and south sides of Rose Lake Marsh and made few comments. The things they like about the two design concepts for the Mason Farm portion of the park include:

- Activities and parking concentrated near the Mason Farmstead
- Nature center, volunteer center, kitchen, gallery , over night lodge at farmstead
- More parking at the farmstead
- Preservation and re-use of the farmstead, especially the barn and log cabin
- Expanded Hearty Gardens
- A road to the first hill west of the farmstead and a shelter at this location
- An accessible trail to the hill overlooking the marsh
- Camping in one area but with campsites apart from each other
- Hiking trails of various lengths
- Trails that do not disturb the marsh
- Small, unobtrusive blinds
- Natural shoreline without visible decks or shelters
- Bicycle paths at the park
- Bicycle connection to Hoard Road
- In general seemed to like Marsh Magic best

The Steering Committee discussed the public comments and developed a final design incorporating them. The final Master Plan will be presented to the public at a Friends of Rose Lake event.

2.3 List of Meetings

The Steering Committee attended six meetings and two public input sessions were held and a park walk. The Steering Committee meeting dates and topics are listed and the public meetings are indicated.

June 26, 2008	Park overview and inventory, tour, and initial visioning session
September 24, 2008	Review of grant conditions, presentation on Rose Lake State Natural Area, Park Opportunities Analysis

October 29, 2008	Presentation on Wetland Reserve Program, review of habitat management units, park design exercise, plan public meeting
December 2, 2008	Information and visioning public meeting, Hoard Museum
January 19, 2009	Park slide show, review of public input meeting, guidance on two design options
April 22, 2009	Review two design options, plan public meeting
May 18, 2009	Public meeting to review two design options, Dwight Foster Library, Fort Atkinson
May 19, 2009	Park walk, Dorothy Carnes County Park – Mason Farm
June 10, 2009	Review public input on two design options, final master plan recommendations
August 3, 2009	Jefferson County Parks Committee Approval of Executive Summary and Master Plan Maps
	Jefferson County Parks Commitee
	Jefferson County Board of Supervisors approval
	Public presentation of Master Plan

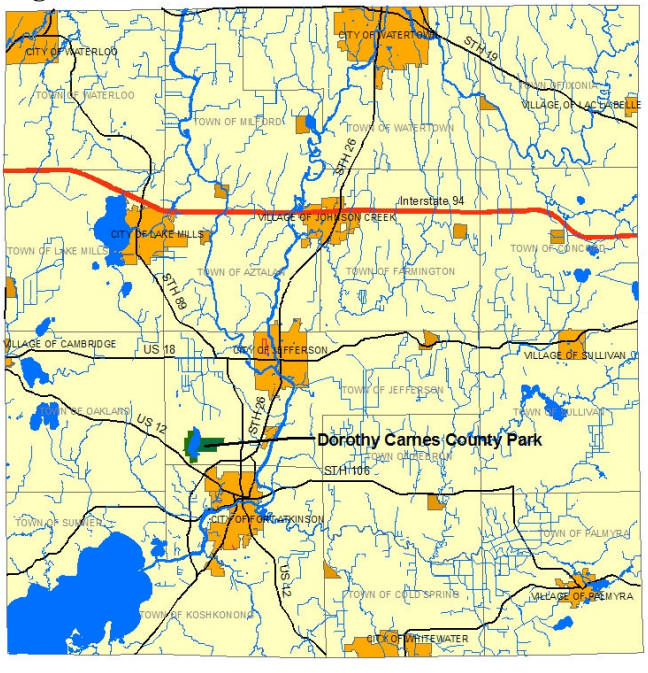
Chapter 3 Background and Inventory

This chapter consists of maps and descriptions of the unique physical characteristics of Dorothy Carnes County Park that makes it so special and that influence the placement of trails, roads, facilities, and other park elements. The inventory, along with input from the Steering Committee, the public, and Park Department staff is part of the site analysis to determine what areas to preserve and where park facilities would be most appropriate and feasible. The grants that were awarded for acquisition, wetland restoration, and wildlife habitat are described in this chapter and also influence what facilities and activities can be placed within those areas.

3.1 Park Location, Surrounding Land Use, Transportation, and Utilities

Dorothy Carnes County Park and Rose Lake State Natural Area are located just northwest of Fort Atkinson in the Town of Jefferson (Figure 3.1). The park is accessible from Radloff Lane off of US Hwy 12 and from Jones Lane off of Banker Road. The Town of Jefferson provided financial support from their parkland dedication fund to build the existing marsh overlook deck

Figure 3.1



Surrounding Land Use

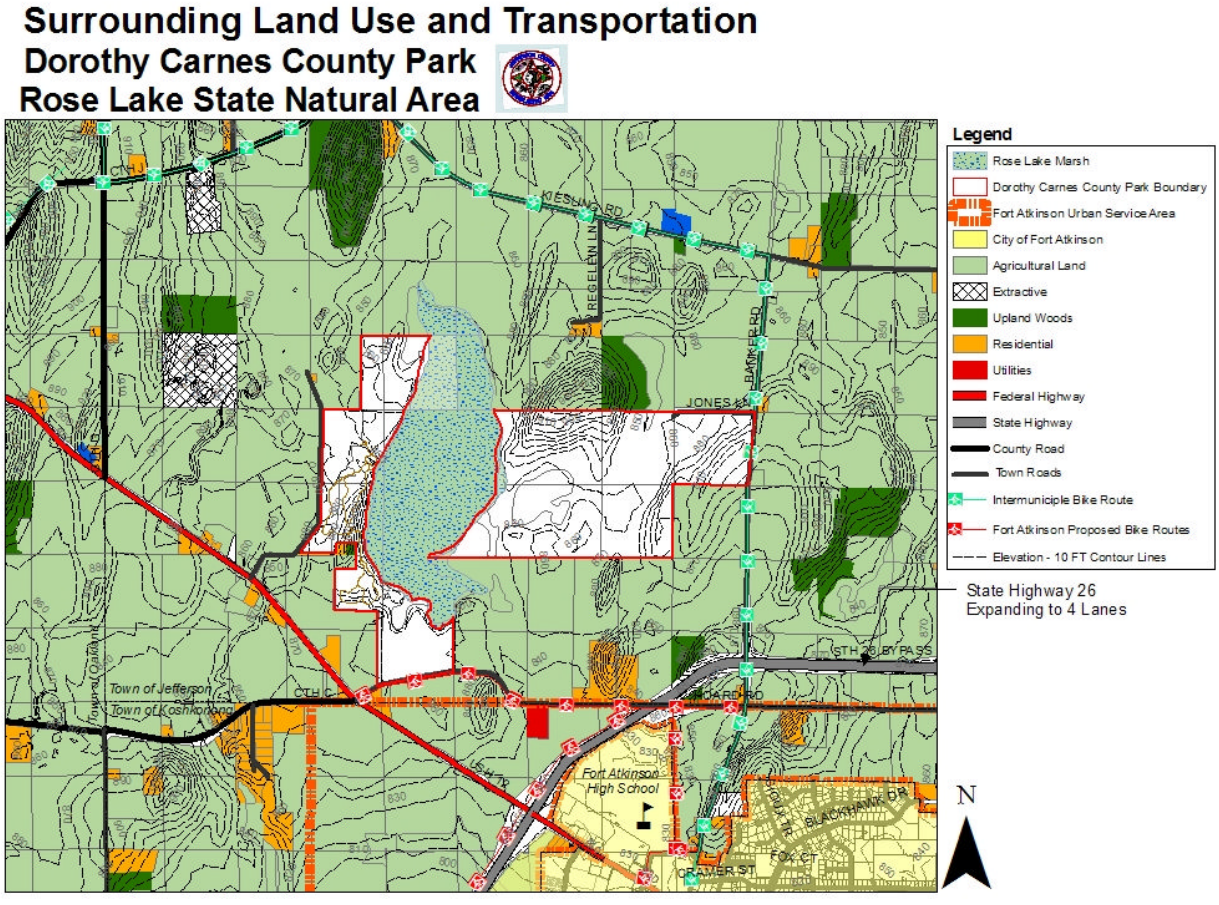
The land surrounding the park is primarily in agricultural production (Figure 3.2). An apple orchard borders the east side of the Mason Farm portion of the park. The remainder of the adjoining land is wooded or farmed. A few rural homes are adjacent to the park and more homes and farms are located along the surrounding roads.

Two gravel pits operate a short distance away to the west and northwest and activity in the pits can be heard at the park occasionally. Traffic noise from USH 12 is also common. The current Jefferson County Bicycle Route follows Banker Road and Kiesling Road between Fort Atkinson and Cambridge (Figure 3.2).

The *Jefferson County Agricultural Preservation and Land Use Plan* designates the land around the park for agricultural preservation. The park, upland woods, wetlands and water bodies are part of the environmental corridor designation.

Dorothy Carnes County Park is less than a mile from the Fort Atkinson High School and a few hundred yards from the Fort Atkinson Urban Service Area boundary, which runs along and just south of Hoard Road (Figure 3.2). It is within the extraterritorial jurisdiction of Fort Atkinson. The *City of Fort Atkinson Comprehensive Land Use Plan* embraces protection of Rose Lake marsh, parks and environmental corridors and the City Council supports the Glacial Heritage Area Plan and possible expansion of Dorothy Carnes County Park. Land south of Hoard Road and east of Banker Road just south of the park is slated for planned neighborhoods in the future. Future planned mixed use development is indicated south of the park along USH 12. These areas would need to be annexed by the City of Fort Atkinson for development to take place.

Figure 3.2



Transportation
Most visitors travel to Dorothy Carnes County Park by car or bicycle, and some even jog. Community ride-share taxi is available in the Fort Atkinson and Jefferson areas. Residents of Opportunities, Inc. are regularly vanned to the park to work in and enjoy Hearty Gardens. Off-road bicycle and pedestrian paths are not available at this time.

A Fort Atkinson bicycle route plan proposes off-street routes along the STH 26 by-pass from Montclair Place to Hoard Road, a route from the High School to Hoard Road, and County bicycle routes on Banker Road and Hoard Road. Jefferson County is currently updating the countywide bicycle and pedestrian plan.

Expanding 6 miles of the STH 26 bypass to four lanes with the addition of an off-road bicycle path and adding bridges at Hoard and Banker Roads is scheduled for 2010-2011. The bridges will provide safer access to Dorothy Carnes County Park, particularly for bicyclists and pedestrians.

Utilities
American Transmission Company power lines cross Dorothy Carnes County Park, the State Natural Area, and the wetland restoration at the Mason Farm. The power company reserves the right to access the towers and lines. Tree height may be limited under the lines. An electrical sub-station is located along Hoard Road just south of the park. The power lines create a visible corridor from the top of the northwest hill at the Mason Farm terminating with a view of the Holiday Inn Express in Fort Atkinson. The power lines are visible from the west side of the marsh as well. Electrical power extends to the Mason farmstead along Jones Lane from Banker Road. No public sewer or natural gas is available. A well is located at the Farmstead and used by Hearty Gardens.

3.2 Population Trends

Jefferson County is located in south-central Wisconsin between the Cities of Milwaukee and Madison and roughly 70 miles northwest of Chicago, Illinois. These large metro areas are connected by the Interstate system.
The population of Jefferson County on January 1, 2008 was estimated at 81,022. The population is increasing, especially in the Townships that are the closest to Milwaukee and Madison along I-94. Jefferson County's population is projected to increase to 100,334 by 2035, a change of 23.8 percent or about 1 percent annually. The population of the State of Wisconsin is expected to increase by 17.2 percent by 2035 to 6,653,951.

Jefferson County is near the three most populated counties in Wisconsin: Milwaukee, Dane and Waukesha, with a combined 2008 population of nearly 1.8 million. The population of these counties increased by 5,257 in one year between 2007 and 2008 according to Wisconsin Department of Administrations Demographic Services Center's *2008 Populations Estimate Summary*. Adjacent Dane and Walworth Counties were the 8th and 10th fastest growing counties respectively in Wisconsin between 2000 and 2008.

The Glacial Heritage Area was centered in Jefferson County because half of the population of Wisconsin lives within one hour of Jefferson County and people want to enjoy recreation and natural areas near where they live. Over three million people live within 100 miles of Jefferson County.

3.3 Geology, Hydrology, Topography, and Views

The topography of Dorothy Carnes County Park was formed by the Wisconsin Glaciation, which melted over 10,000 years ago. Rose Lake (176 acres) is a glacial depression and deep water marsh, also know as a "prairie pothole", embedded in an area of end moraine deposited by retreating glaciers. There is no inlet to the marsh and the marsh is fed by rain water running off and percolating through the surrounding hills and a few springs in the south end of the marsh. Drainage from the marsh is evident to the south, crosses Hoard Road around the electrical sub-station and eventually flows to Lake Koshkonong.

Rose Lake Marsh 2009

Wide water level fluctuations are characteristic of pothole marshes. Park neighbors say they have never seen water as high as it was in 2008 and 2009 when the area received excessive precipitation, probably increasing groundwater levels in certain areas. The marsh was nearly dry in 2003 when precipitation was below average for a few years. Metal fence posts in the marsh are a reminder of a time when it was actually pastured.

Rose Lake Marsh 2003

Rolling hills surround the marsh and wetlands within the park as is typical in Jefferson County. Elevations on the west side of the marsh range from 844 feet above sea level to 898 feet at the top of the north-south ridge where the turtle mound is located on the Ward parcel (Figure 3.3).

Figure 3.3

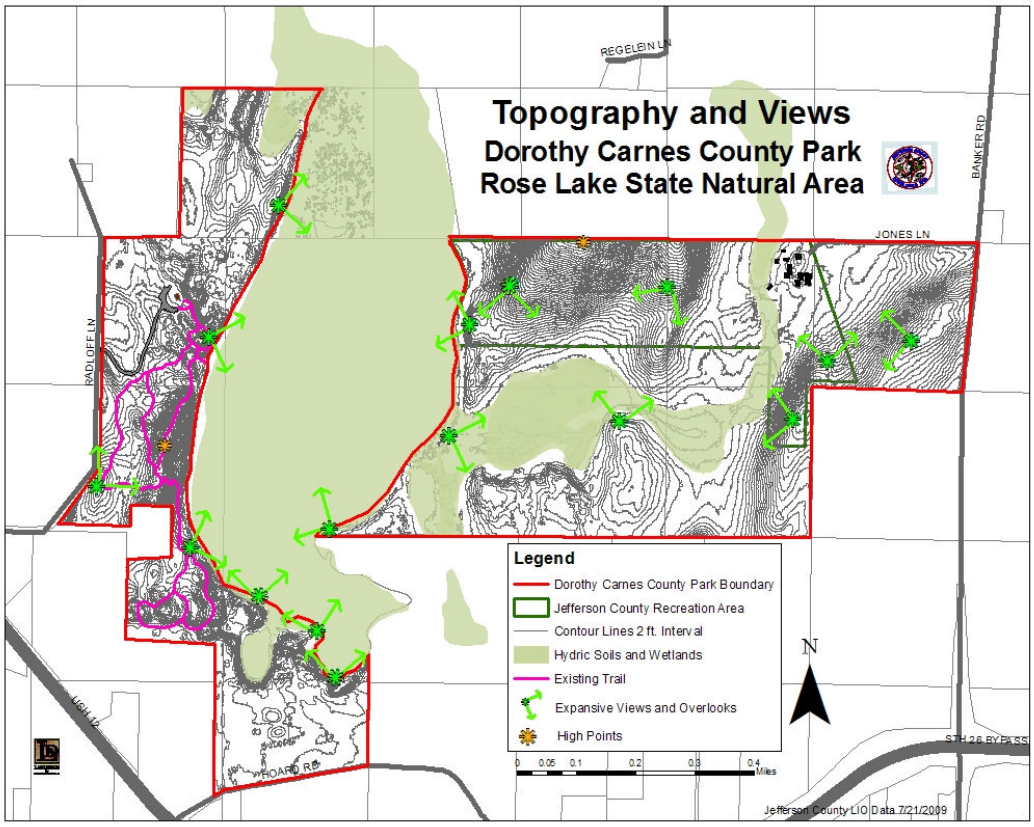
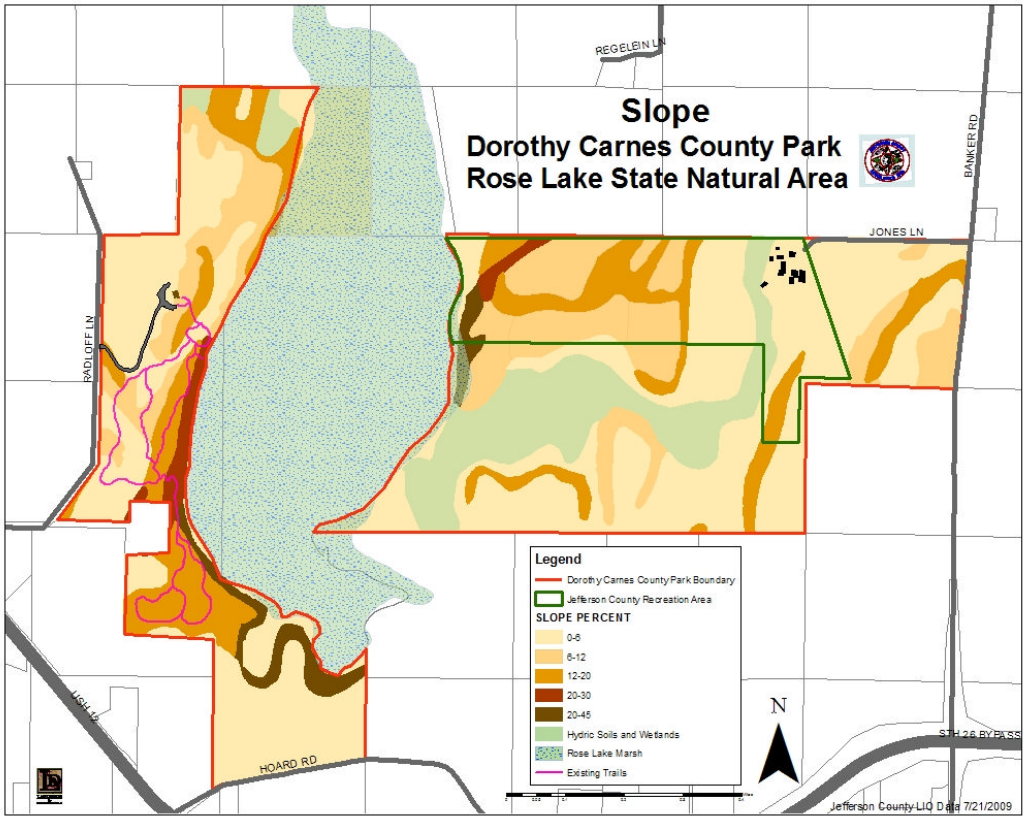


Figure 3.4



On the Mason Farm portion of the park, elevation ranges from 844 feet at the marsh to 946 feet on the northwest hill and 918 feet along Banker Road. The varied topography was not all formed by glacial retreat. Many of the natural-looking "kettles" on the Hamer and Radloff parcels were actually gravel pits excavated during the construction of USH 12 in the 1950's. The influence of time and weather has given them a very natural appearance. The pits with their steep sides and seasonal ponds increase the diversity of habitats and hiking experiences at Dorothy Carnes County Park.

Steep slopes of up to 45 percent are found in the northwest corner of the Mason Farm near the marsh and on the Hamer parcel along the marsh (Figure 3.4). The high points and steep hill provide beautiful vantage points to observe the waterfowl activity and view the park and surrounding countryside. Possible overlook points are illustrated in Figure 3.3. Attendees at the public meetings stressed their desire to keep marsh views free from constructed facilities.

3.4 Soils

The soil types at Dorothy Carnes County Park are as varied as the topography, ranging from waterlogged silty clays to sands. The soils vary widely in their texture, slope, and ability to drain. Park development possibilities depend on the existing soil conditions among other factors.

Soils of the upland portions of Dorothy Carnes County Park tend to be sandy and gravelly and include the following soil series: Casco, Casco-Rodman, Fox, Juneau, Kidder, McHenry, Moundville, Rotamer, and St. Charles. Soil textures include loam, silt loam, and loamy sand. Some of these soils may be located in extremely steep areas and can be prone to erosion if exposed. Soils along the edge of the marsh and under the wetlands are level and usually waterlogged silt and clay loams and not suitable for trails, roads or facilities.

Soil suitability was assessed for trails, playgrounds and picnic areas, building excavation, roadways and camping. Soil limitations can be slight, moderate or severe (Table 5).

- **Slight Soil Limitations**: Soils without significant limitations for construction of trails, picnic areas, roadways, building excavations or campgrounds. These soils are generally level, have low erosion potential, and drain easily.

- **Moderate Soil Limitations**: Improvements can be built with additional restrictions and increased costs. These soils may be steeper, more prone to erosion, have lower strength or are poorly drained. Trails should run parallel to the slope to minimize erosion and rutting and not exceed 10% slope.

- **Severe Soil Limitations**: Development on these soils has additional impacts on natural resources and significant engineering costs and restrictions. These soils are on very steep slopes, have severe erosion potential or are already eroded, may have very low strength, or may flood periodically.

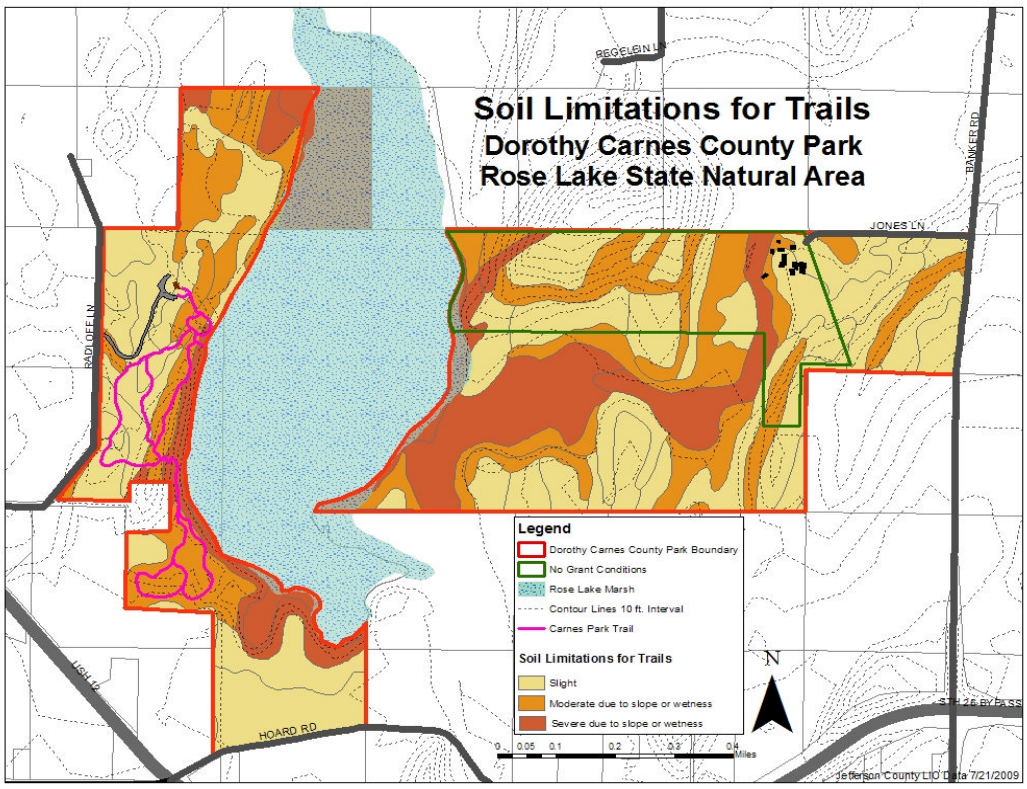
Construction of facilities is most easily accomplished at the least financial cost and environmental damage on soils with slight and moderate limitations. These soils generally occur in the gently rolling portions of the park above the wetlands and the marsh. Severe limitations arise along the steep ridges overlooking the marsh and in and along the wetlands.

Table 3.5 Soil Limitation Chart

Soil Type	Soil Name Percent Slope	Trails	Play/Picnic Areas	Roadway	Building Excavation	Camp Area
CaC2	**Casco Loam** 6%-12%	Slight	Severe/Moderate	Moderate	Severe	Moderate
CrD2	**Casco-Rodman Complex** 12%-20%	Moderate	Severe/Moderate	Severe	Severe	Severe
CrE	**Casco-Rodman Complex** 20%-45%	Moderate	Severe	Severe	Severe	Severe
DdB	**Dodge Silt Loam** 2%-6%	Slight	Moderate/Slight	Severe	Slight	Slight
FoC2	**Fox Loam** 6%-12%	Slight	Severe/Moderate	Severe	Severe	Moderate
FsA	**Fox Silt Loam** 0%-2%	Slight	Slight	Severe	Moderate	Slight
FsB	**Fox Silt Loam** 2%-6%	Slight	Moderate/Slight	Severe	Moderate	Slight
JuB	**Juneau Silt Loam** 1%-6%	Moderate	Severe/Moderate	Severe	Severe	Severe
KfB	**Kidder Loam** 2%-6%	Slight	Moderate/Slight	Moderate	Slight	Slight
KfC2	**Kidder Loam** 6%-12%	Slight	Severe/Moderate	Moderate	Moderate	Moderate
KfD2	**Kidder Loam** 12%-20%	Moderate	Severe/Severe	Severe	Severe	Severe
MmA	**Matherton Silt Loam** 2%-6%	Moderate	Severe/Moderate	Severe	Severe	Moderate
MpC2	**McHenry Silt Loam** 6%-12%	Slight	Severe/Moderate	Moderate	Moderate	Slight
MvB	**Moundville Loamy Sand** 1%-6%	Moderate	Moderate	Slight	Slight	Moderate
RtD2	**Rotamer Loam** 12%-20%	Severe	Severe	Severe	Severe	Severe
RtE2	**Rotamer Loam** 20%-30%	Severe	Severe	Severe	Severe	Severe
SbB	**St. Charles Silt Loam** 2%-6%	Slight	Moderate/Slight	Severe	Moderate	Slight
SfB	**St. Charles Silt Loam** 2%-6%	Slight	Moderate/Slight	Severe	Severe	Slight
Sm	**Sebewa Silt Loam** 0%	Severe	Severe/Severe	Severe	Severe	Severe
VwA	**Virgil Silt Loam** 0% -3%	Moderate	Severe/Moderate	Severe	Severe	Severe
Wa	**Wacousta Silty Clay Loam** 0%	Severe	Severe/Severe	Severe	Severe	Severe

Soil limitations for trails and paths are assessed in Figure 3.6 and would be fairly similar for other types of infrastructure and facilities. Trails or roads in the moderate and severe soil limitation areas should be designed parallel to the slope and maintain slopes of less than 10 percent to limit erosion and rutting.

Figure 3.6



3.5 Rose Lake State Natural Area, Wildlife, Vegetation, and Habitat

Rose Lake State Natural Area
The Wisconsin Department of Natural Resources Bureau of Endangered Resources considers unique and uncommon natural areas with features in one or more of the following categories for designation as State Natural Areas.

- Outstanding natural community
- Critical habitat for rare species
- Ecological benchmark area
- Significant geological or archaeological feature
- Exceptional site for natural area research and education

Wisconsin State Natural Areas are open to the public but often in out of the way places and not advertised to the public in order to protect sensitive areas and species from over use. Dorothy Carnes County Park is one of a few public parks with this designation. Accepting the designation was voluntary on the part of Jefferson County and indicates how much the community values that this pristine marsh and upland ecological complex.

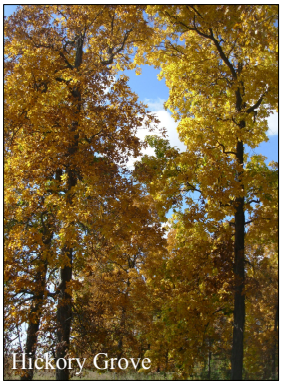
The following description of the Rose Lake State Natural Area from the *Rose Lake State Natural Area Management Plan* conveys the importance of the natural values found at Dorothy Carnes County Park.

"Rose Lake is a shallow, hard water seepage lake surrounded by wetlands, oak openings, and steep hills. With a maximum depth of 5 feet, Rose Lake contains a submerged aquatic plant community dominated by Illinois pondweed, grass-leaved pondweed, and coon's-tail. Other aquatics include common water-milfoil, common pondweed, comb pondweed, and common bladderwort. Common and star duckweed with common water-meal float on the surface. The west side of the lake is dominated by a large floating mat of American woolly-fruit sedge, blue-joint grass, and spike-rush.


Trillium


White Pelicans

The exposed mud flats attract numerous shorebirds such as pectoral sandpiper, least sandpiper, solitary sandpiper, and lesser yellowlegs. The lake and surrounding wetlands are also important breeding habitat for black tern, black-crowned night-heron, and redhead. Other breeding birds are sandhill crane, great blue heron, pied-billed grebe, American coot, common moorhen, blue-winged teal, ruddy duck, tree swallow, bank swallow, and marsh wren. Large numbers of yellow-headed blackbirds also nest here. American white pelicans began using the wetland in 2003 when over 800 were recorded.


Hickory Grove

Soft-stem bulrush and cat-tails ring the north, south and east shores. Numerous freshwater sponges and a diverse dragonfly/damselfly population indicate a lack of serious water quality problems. The wetlands are also rich in wildlife with many species of mammals, reptiles, and amphibians.


Wetland Scrape

Much of the land around Rose Lake is cropland, former pasture, and oak woods. There are also three drained wetlands on the east side of the property. If the wetlands are restored and the cropland is converted to prairie the water quality in Rose Lake should improve."

Vegetation and Wildlife

Prior to European settlement and the advent of agriculture, western Jefferson County was covered by oak savanna and prairie, interspersed with more heavily wooded areas. Land surveyor notes from 1836 for this area document the landscape, vegetation and topography. Rose Lake was called an impassible marsh. The area was described as rolling black, white, and bur oak openings and timber. This description could be interpreted as oak savanna interspersed with oak woodland. Southwest of the park the surveyors documented prairie vegetation.

The Jefferson County Parks Department has been improving the natural habitat since the first parcel was purchased and the park is beginning to look they way it did at the time of the original land surveys. Park visitors have said that they and their children enjoy the prairie experience they have read about in books about Midwestern pioneers.

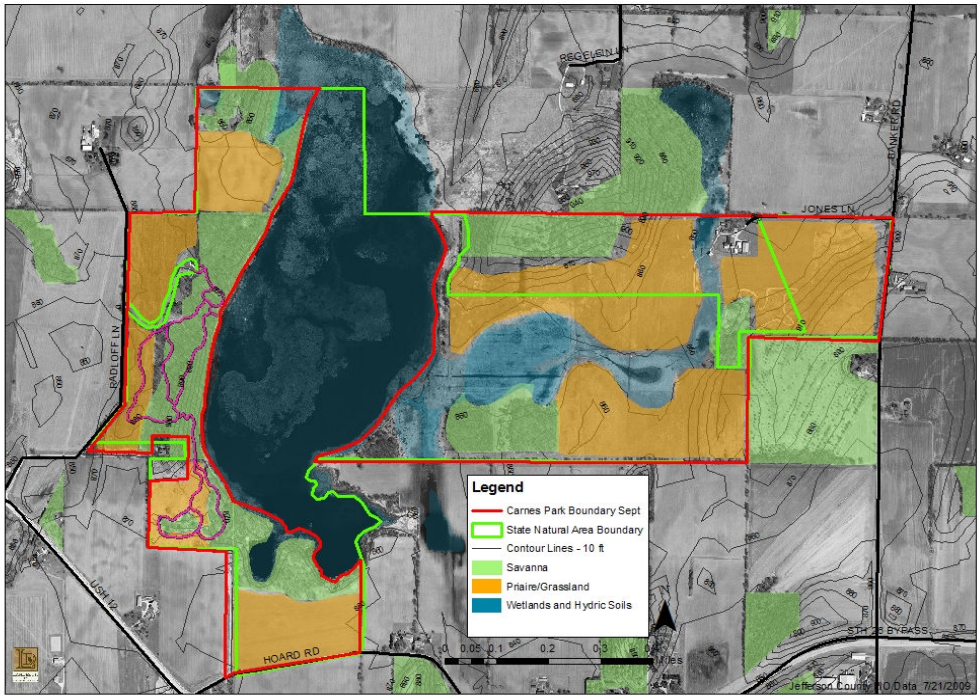
Parks staff and volunteers clear invasive species from the woodlands and seed and burn prairies regularly. Uncommon waterfowl and prairie and grassland bird species frequent the park and State Natural Area. The park is usually alive with the bird songs and an albino red-tailed hawk has been sighted. Deer, turkey, fox, coyote, muskrat, otter, snakes, and other common wildlife live here as well. The Friends of Rose Lake conducts regular, well-attended bird walks.

Tree species in the savanna restoration areas are being managed for oak and hickory. Prairie restorations feature mesic (medium moisture) species. Former hay fields and pastures have been retained as grasslands for grassland birds which are in decline.

Detailed management recommendations for the Rose Lake State Natural Area are listed in Chapter 5. Figure 3.7 maps the park habitat types – prairie/grassland, savanna, and wetland.

Figure 3.7

Dorothy Carnes County Park Vegetation
Rose Lake State Natural Area



Dorothy Carnes County Park and Rose Lake State Natural Area are also included in the Southern Savanna Region of the Great Wisconsin Birding and Nature Trail. The WDNR Endangered Resources Program has developed a series of five highway-based viewing guides to the unique regional ecosystems of Wisconsin. The guides highlight the best birding and wildlife watching opportunities in the state.

Wetland Reserve Program

The Jefferson County Parks Department partnered with the Madison Audubon Society and the USDA Wetland Reserve Program (WRP) to purchase 164 acres of the Mason Farm portion of Dorothy Carnes County Park and Rose Lake State Natural Area and also provided funding for on-going wetland, prairie and savanna restorations. The WRP placed a perpetual conservation easement on the land.

Wetland restoration and berm on the Mason Farm

WRP is a voluntary program available to private and public landowners that provides incentives to retire marginal farmlands that would serve society better as wetlands rather than crop lands that require extensive drainage and pumping.

The restoration of the wetland on the Mason Farm covers 74 acres and enhances habitat for waterfowl, migratory birds, shorebirds, and wetland species. The restoration removed features that impeded wetland functions such as the ditch system that existed on the property. The ditch system kept the water table artificially low so the land could be farmed or pastured. A low head berm and a water control device were built by the Jefferson County Highway Department between the wetland and Rose Lake Marsh. The water can be raised or lowered for species management. A wetland scrape, a shallow water depression, was also installed at the Mason Farm for waterfowl habitat

Management Unit Map

Mark Martin of the WDNR Bureau of Endangered Resources talked about a draft map of habitat management units for the whole park, except for the Jefferson County Recreational Activity Area on the north side of the Mason Farm. The 6 ft. wide mowed paths between the management units can be used for hiking.

The management units comprise different types of habitat and will be managed for prairie, savanna, grassland, and wetland. The units may be burned at different times. Some of the units may be up to 30 acres in size and the mowed paths create several miles of trails.

The whole State Natural Area is open to public use for hiking, cross-country skiing, snow shoeing, and hunting (if allowed by the County). Only management trails may be allowed and access to all parts of the SNA might not be provided.

3.6 Acquisition Grants

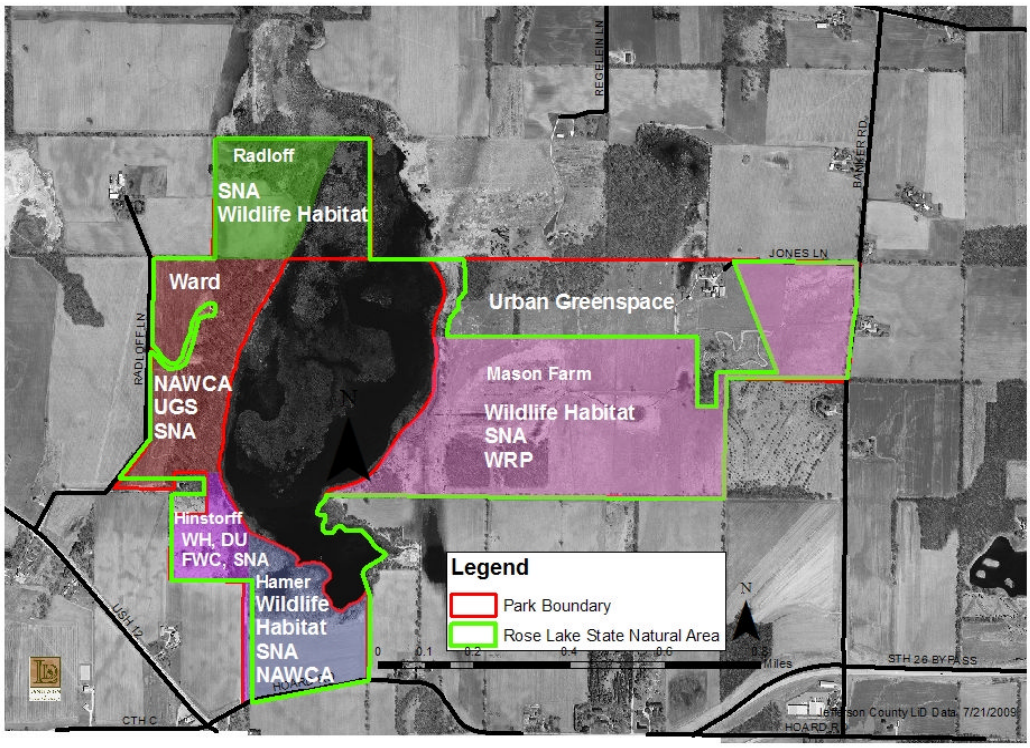
The Jefferson County Parks Department has been very active in applying for and securing grants for the acquisition of Dorothy County Carnes Park. All the partners who worked together to establish this park are listed in Chapter 1 – Park History and Prior Planning. The grant awards enabled Jefferson County to acquire the park land with little cost to County property tax levy. All of the WDNR, U.S. Fish and Wildlife Service, and Wetland Reserve Program grants came with stipulations on how the land will be

managed and what activities and facilities will be allowed. The following section and Figure 3.8 summarize the grant awards and their conditions.

The abbreviations in Figure 3.8 refer to the following grants:

SNA	Rose Lake State Natural Area (a designation with management recommendations)
WH	WDNR Wildlife Habitat Grant
UGS	WDNR Urban Greenspace Grant
NAWCA	U.S. Fish & Wildlife Service North American Wetland Conservation Act Grant and Partners for Fish and Wildlife
WRP	U.S.D.A. Natural Resources Conservation Service Wetland Reserve Program
FWC	Fort Wisconservation Club Grant
DU	Ducks Unlimited Grant

Figure 3.8
Dorothy Carnes County Park & Rose Lake State Natural Area
Parcels and Grant Partners



Rose Lake State Natural Area 480 acres (everything except 81 acres of the Mason Farm and the driveway and shelter on the Ward parcel)

- The purpose of the State Natural Area is to protect outstanding examples of native natural communities, significant geological formations and archaeological sites. Hiking, nature appreciation, and education uses that do not degrade the natural features are permitted. SNA is a designation not a grant but does make management and use recommendations

Mason Farm Wetland Reserve Area 168 acres - also State Natural Area, WDNR Wildlife Habitat Grant through Madison Audubon Society

- The purpose of the Wetland Reserve is to reverse wetland loss and restore wetland functions. The area can be used for quiet enjoyment (hunting, fishing, and trapping – if allowed by Jefferson

County) and trails not detrimental to habitat (i.e. double as fire breaks). All trails, fixtures, and construction require a compatible use request. The wetland restoration totals 74 acres and the associated upland prairie restoration and grasslands total 90 acres.

Mason Farm 81 acres outside of Wetland Reserve Area – WDNR Urban Greenspace Grant

- The purpose of Urban Greenspace Grants is to provide open natural space within or in proximity to urban areas; to protect from urban development areas that have scenic, ecological or other natural value and are within or in proximity to urban areas; and to provide land for noncommercial gardening for the residents of an urbanized area. Grant goals for this portion of the Mason Farm are preservation and improvement of wildlife habitat and water quality. According to the grant proposal, uses for this portion of the park include hiking, cross-country skiing, snowshoeing, picnicking, unstructured play, nature study, bird watching, photography and rustic group camping. A marsh overlook deck may be constructed.

Hamer Parcel 40 acres – WDNR Wildlife Habitat, Madison Audubon Society, Partners for Fish and Wildlife Habitat Development (USFWS) NAWCA Grant, State Natural Area

- The purpose of the Wildlife Habitat Grant is to protect, restore, and improve natural communities, the natural Rose Lake Marsh shoreline, and the water quality of Rose Lake Marsh. The property may be used by the public for hiking, nature study, environmental education, research, cross-country skiing and snowshoeing. No horseback riding or camping. Grassland and savanna restoration are the main activities. The existing access lane can be maintained small parking lots may be established adjacent to Hoard Road on the southeast and southwest corners of the property. Boundary and information signs may be posted. A bench and small shelter may be placed where wildlife habitat will not be impacted on the upland in the north east corner of the property. Trails may be established to provide access for management activities and may serve as hiking and cross-country ski trails for the public.

Hinstorff Parcel 19 acres - WDNR Wildlife Habitat Grant, Madison Audubon Society, Ducks Unlimited Marsh Grant, Fort Wisconservation Club, Jefferson County Land Trust, State Natural Area

- The purpose of the Wildlife Habitat Grant is to prevent development, maintain water quality, provide upland nesting cover, and to protect, restore, and improve natural communities, the natural Rose Lake Marsh shoreline, and the water quality of Rose Lake Marsh.
- The site is open to public for use including bird watching but no disturbance during the nesting season. The property may be used by the public for hiking, nature study, environmental education, research, cross-country skiing and snowshoeing. No horseback riding or camping. Mowed paths for hiking or cross-country skiing may be established.
- The existing road may be maintained in its current condition. Signs for educational or information purposes may be erected and perimeter signs placed along the boundaries. A parking lot for cars or bicycles may be constructed adjacent to Hoard Road. Boundary and information signs may be posted. Trails may be established to provide access for management activities and may serve as hiking and cross-country ski trails for the public.

Ward Parcel 58 acres – WDNR Urban Greenspace Grant for Acquisition, USFWS NAWCA Grant, Jefferson County Land Trust, State Natural Area except for driveway and shelter area, private donations, Fort Atkinson Community Foundation for the shelter.

- The purpose of the NAWCA Grant (North American Wetland Conservation Act) is long-term protection, restoration, and/or enhancement of wetlands and associated uplands habitats for the benefit of all wetlands-associated migratory birds. The purpose of the Urban Greenspace Grant is provide open natural space within or in proximity to urban areas; to protect from urban development areas that have scenic, ecological or other natural value and are within or in

proximity to urban areas; and to provide land for noncommercial gardening for the residents of an urbanized area. A master plan for this parcel was completed in 2001

Radloff Parcel 28 acres - WDNR Wildlife Habitat Grant, Madison Audubon Society, State Natural Area

- The purpose of the State Natural Area and Wildlife Habitat Grant is to protect in perpetuity the significant elements of biological diversity in a natural condition. The property has important ecological, scientific, and educational values as a natural habitat for plants and animals. Trails shall be rustic in character and composed of pervious materials, the location of any new trails shall be approved by the WDNR. Trails may be used for firebreaks, walking, cross-country skiing, and other non-motorized recreational activities. Interpretive signs may be placed that do not diminish the scenic character of the property.

CHAPTER 4 DOROTHY CARNES COUNTY PARK MASTER PLAN

4.1 Vision, Goals, and Design Philosophy

A master plan was developed in 2001 for the first parcel purchased for Dorothy Carnes County Park, the Ward parcel. During that process visions and goals were developed. The Steering Committee reviewed the visions and goals as they applied to the expanded park and made no changes.

Vision
Dorothy Carnes County Park on Rose Lake is a beautiful and serene undiscovered jewel. Jefferson County will develop a year-round park preserve on this site. The rich cultural and natural resources found here will be preserved, protected and restored while providing passive recreation, education and access to all.

Goal 1: Preserve, protect and/or restore the rich cultural and natural resources.

Design Philosophy
- Enhance and restore native plant communities and habitat for wildlife and waterfowl while providing for public enjoyment of the park.
- Celebrate the water – woodland – grass interface and the diversity of habitats that naturally occur in a relatively small area.
- Minimize habitat fragmentation by careful trail and facilities placement.
- Use the restoration process to inform the public about natural systems.

Goal 2: Provide year round passive recreation and public access.

Design Philosophy
- The trails will provide a variety of visitor experiences.
- Trails will utilize existing topography with a minimum of disturbance.
- Trails will lead to locations with interesting views of the marsh and other natural focal points.
- Access will be provided to the variety of natural animal and plant communities found in the park.
- Group facilities to minimize the impact on the environment.
- Facilities will be designed to blend with the prairie and savanna landscape and will utilize natural, high quality materials in construction.
- Facilities will be universally accessible whenever possible and a natural resource interpretive experience will be provided for all ranges of mobility.

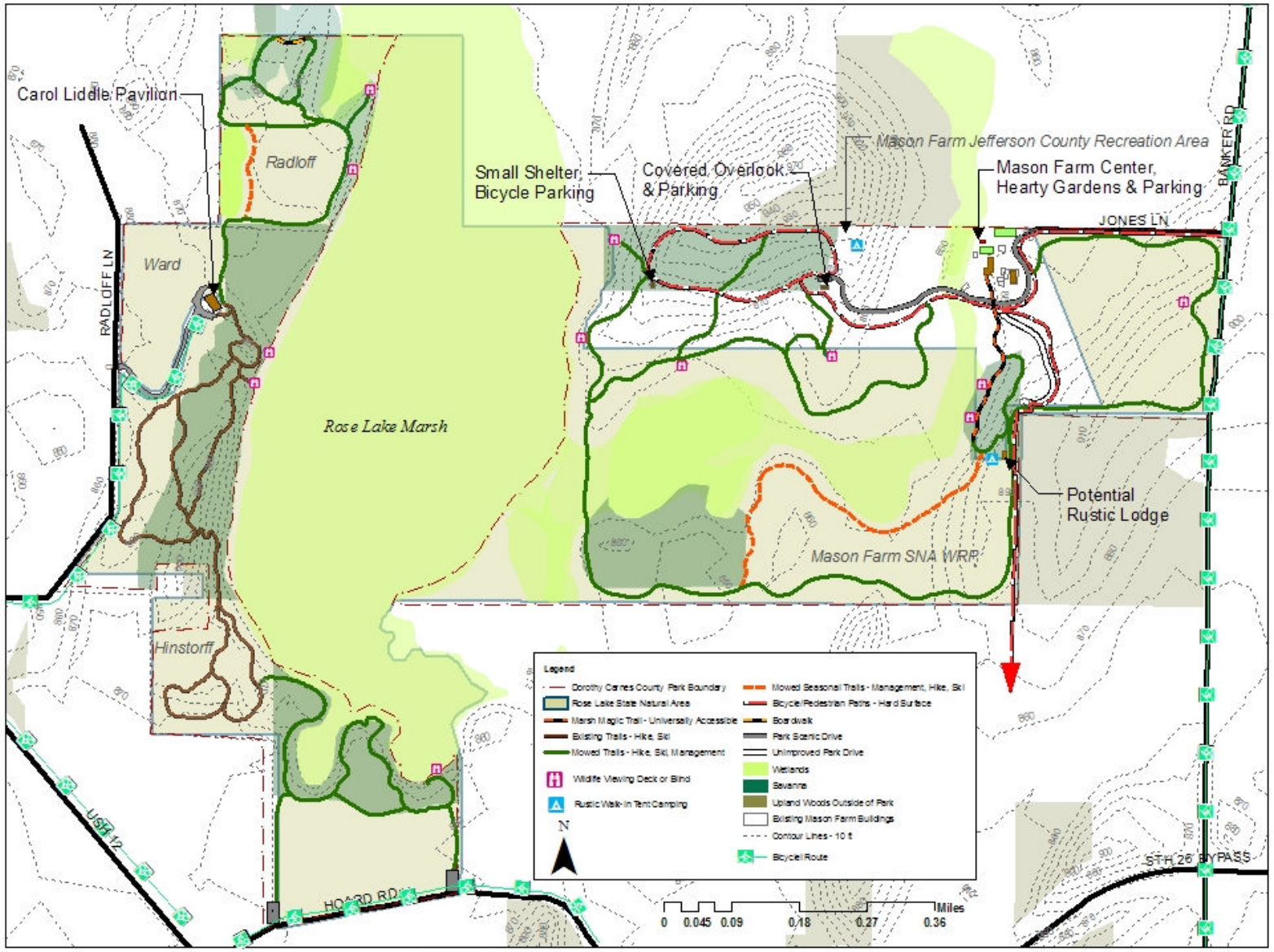
Goal 3: Encourage public education and involvement opportunities in ecology, environmental science, natural resources protection, native plant community restoration, local history, and other appropriate fields.

Design Philosophy
- Make learning fun and inviting.
- Introduce Jefferson County park users to this hidden jewel.
- Provide education on a variety of topics, such as science, hydrology, ecology, geology, Native American history and culture, settlement history, natural history, astronomy, art and local lore.

Goal 4: Involve the communities and citizens of Jefferson County in park creation and improvements.

Design Philosophy
- Good public relations and continued financial support are crucial to the long-term success of our park.

Figure 4.1



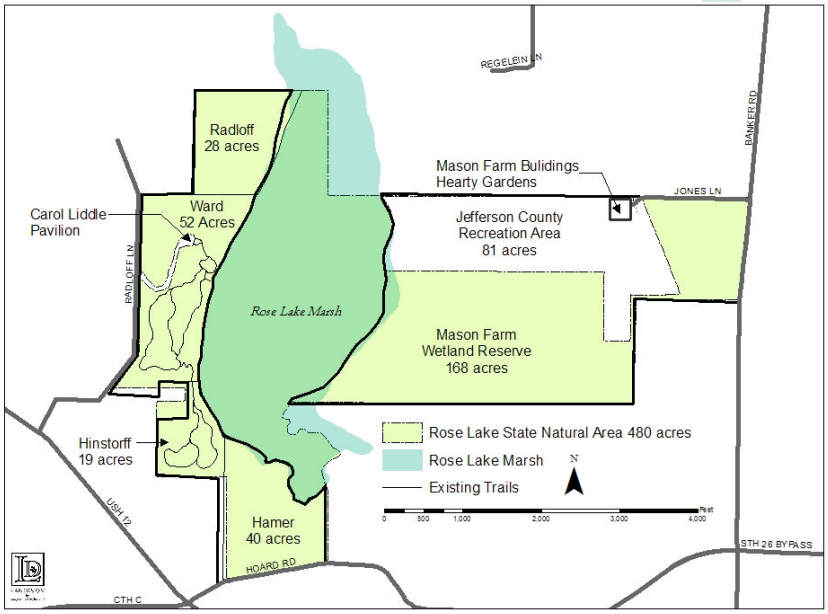
Dorothy Carnes County Park
Rose Lake State Natural Area

Master Plan

4.2 Master Plan

All of Dorothy Carnes County Park and the Rose Lake State Natural Area are open to the public. Users are most familiar with the Ward, Hinstorff, and Hamer parcels where trails and access have been developed. The master plan proposes a coherent design for the entire park that invites visitors to experience all of its habitats and features.

Figure 4.2
Dorothy Carnes County Park & Rose Lake State Natural Area



Overall attendees at public meetings value these things about Dorothy Carnes County Park itself:

- Birds
- Marsh
- Immersion in Nature
- Quiet
- Views without human contrivances
- Farmstead memories and experiences
- Hearty Gardens

Participants also enjoyed trail-based recreation such as hiking, skiing, and bicycling. Details about public involvement are in Chapter 2 Public Participation. The Steering Committee considered public input and the diverse interests of Steering Committee members in finalizing the Master Plan design.

Design Philosophy
The design concept for the Dorothy Carnes County Park and Rose Lake State Natural Area (Figure 4-1) takes into consideration the exceptional natural resources, in particular pristine Rose Lake Marsh and the uncommon waterfowl and upland birds that frequent the area, the expansive rural nature of the park, the historical elements such as the turtle effigy mound and the Mason Farmstead, and the grant conditions associated with the funds needed to purchase the park..

The Master Plan seeks to provide experiences that would appeal to a wide range of users. Some visitors enjoy immersing themselves in nature or their favorite recreational activity and are willing to do whatever it takes to do so - such as being at the park at dawn, hiking, running or biking long distances, and braving the elements. Other visitors enjoy nature and learning about it while they pursue another activity such as gardening, biking, jogging, hiking, picnicking, taking a scenic drive, or just relaxing. Some visitors come to natural areas or rural settings to express their creativity by drawing, writing, photography, and having a social experience. Still others may come to the park to picnic, garden, throw a Frisbee, or have an outing with their family, not necessarily to view nature or wildlife.[1]

Today some visitors may not realize the effect their activities may have on wildlife and birds and would like to learn how to appropriately view and interact with wild creatures. It is our hope that the design of this park will be conducive to such learning and will enhance the visitor's experience and appreciation of the natural world.

The Mason Farmstead forms a hub that is within the park but removed from Rose Lake Marsh. This seems to be an ideal place for visitors to gather. The barn and perhaps some of the other buildings could be re-used for activities and displays. Remote cameras overlooking the marsh could bring the activities of waterfowl on the marsh to the nature or visitor's center. The farm buildings could also be considered a transition area from city life to a rural lifestyle and the world of nature.

Park visitors have different capabilities. The Master Plan is designed to provide park enjoyment and historical, prairie, savanna, and marsh experiences for a range of abilities from the active cyclists and hikers to families with strollers or wheelchairs.

Trail Length Chart

Total Trail Length 9.8 miles
- 5.9 miles total on Mason Farm
- 3.9 miles total on West and South Shores

Mason Farm Trail Length

5.9 miles	Total Length
1.8 miles	Hard Surface Bicycle/Pedestrian Paths (red)
2.8 miles	Perimeter Path
0.46 miles	Marsh Magic Trail round trip on universally accessible portion from barn
0.44 miles	Marsh Magic Trail round trip on whole trail from trailhead
0.50 miles	Trail from Barn to shelter overlooking Rose Lake Marsh one way
0.67 miles	Park Drive
0.20 miles	Un-improved Park Drive

West and South Shores Trail Length

3.9 miles	Total Length
1.0 miles	Radloff Parcel
1.3 miles	Ward Parcel
0.5 miles	Hinstorff Parcel
1.1miles	Hamer Parcel

4.3 West and South Shore Master Plan

The west side of Dorothy Carnes County Park encompasses 146 acres. The design of the Radloff and Hamer parcels builds on the existing park infrastructure (Figure 4-3). Currently a park drive, parking lot, the Carol Liddle Pavilion, restrooms, a universally accessible overlook deck, and 1.7 miles of trails are available to visitors. This portion of the park is all within the Rose Lake State Natural Area except for the park drive and grassy area immediately around the Carol Liddle Pavilion. The public greatly enjoys the existing shelter, overlook and trails and the parking lot is often overflowing on weekends. Expansion of the trail system could disperse users to make the experience better for all.

West and South Shore Summary
- Total management, hiking, skiing trail length of 3.9 miles, new trail length 2.2 miles.
- A trail along the edge of the woodland on the Ward parcel connects the Carol Lidde Pavilion and parking lot to the Radloff parcel.
- On the Radloff parcel (1.1 miles of trail) the design takes advantage of mowed farm lanes to and along Rose Lake Marsh.

- A viewing blind or overlook is located along the trail above the marsh. Removal of invasive tree and shrub species will enhance the view. Introducing native shrubs could provide some screening between visitors and the marsh.
- A spur trail along a ridge has views of both the marsh and a sedge meadow. A viewing blind is located at the tip of this ridge.
- In the northwest corner a loop trail traverses the interesting topography (some of which is from gravel quarrying) with views of wetlands and adjacent farmlands. A boardwalk may be needed across the swale between two ridges. Savanna habitat management is suggested for this area.
- A trail along a pothole wetland along the west edge of the parcel may be seasonal to prevent disturbance during nesting. An existing farm lane provides an alternative route if this trail is closed.
- If additional land is purchased, road access to this parcel might be possible from Radloff Lane and a shelter could possibly be located away from the marsh.
- Existing trails are maintained on the Historff parcel and the land is managed for grassland and savanna. A gravel lane provides walking access to Hoard Road. A small parking lot may be located at Hoard Road.
- On the Hamer parcel, a small parking lot with bicycle rack and informational kiosok is located near Hoard Road. A waterfowl viewing blind with seating and informational signs, which could function as a small shelter, is placed near the marsh with a screened approach.
- A hiking trail (1.1 miles) on the Hamer parcel provides views of the marsh, interesting topography, and wetlands. The trail follows the edge of a ridge above the marsh and connects to the existing trails on the Hinstorff parcel.
- Management activities should continue in the prairie, savanna, and wetlands.
- Detailed species inventories and research should be initialed.

4.4 Mason Farm Master Plan

In designing the Mason Farm portion of the park (248 acres), two different use areas are designated – the Rose Lake State Natural Area and Wetland Reserve portion (164 acres) and the Jefferson County Recreation Area portion (81 acres), Figure 4- 4.

The Jefferson County Recreation Area may feature more built facilities and more intensive use than the remainder of the Mason Farm. Though a boundary line has been drawn between these two areas, it is the intent of the Master Plan to allow the natural processes, rhythms, and cycles to proceed unimpeded in the park as a whole. The Master Plan concentrates universal park access, infrastructure such as parking, running water, restrooms, and a wide range of activities close to the Mason Farmstead and leaves the remainder of the Mason Farm for habitat restoration and mowed management trails that can double as hiking trails.

- A Marsh Magic Trail is proposed that originates at the Mason Farmstead and travels south along the wetland scrape, through the savanna overlooking the scrape, and through the prairie back to the Farmstead. The trail from the Farmstead to the scrape is designated as universally accessible and could be a boardwalk with platforms that provide different views. At the wetland scrape a wheelchair and stroller accessible blind would allow all users to experience the marsh and see waterfowl. The trail from the barn to the scrape and back is one half mile in length. A native plant identification border could be planted along the trail. This trail could appeal to all users from the most casual to the most experienced birder.

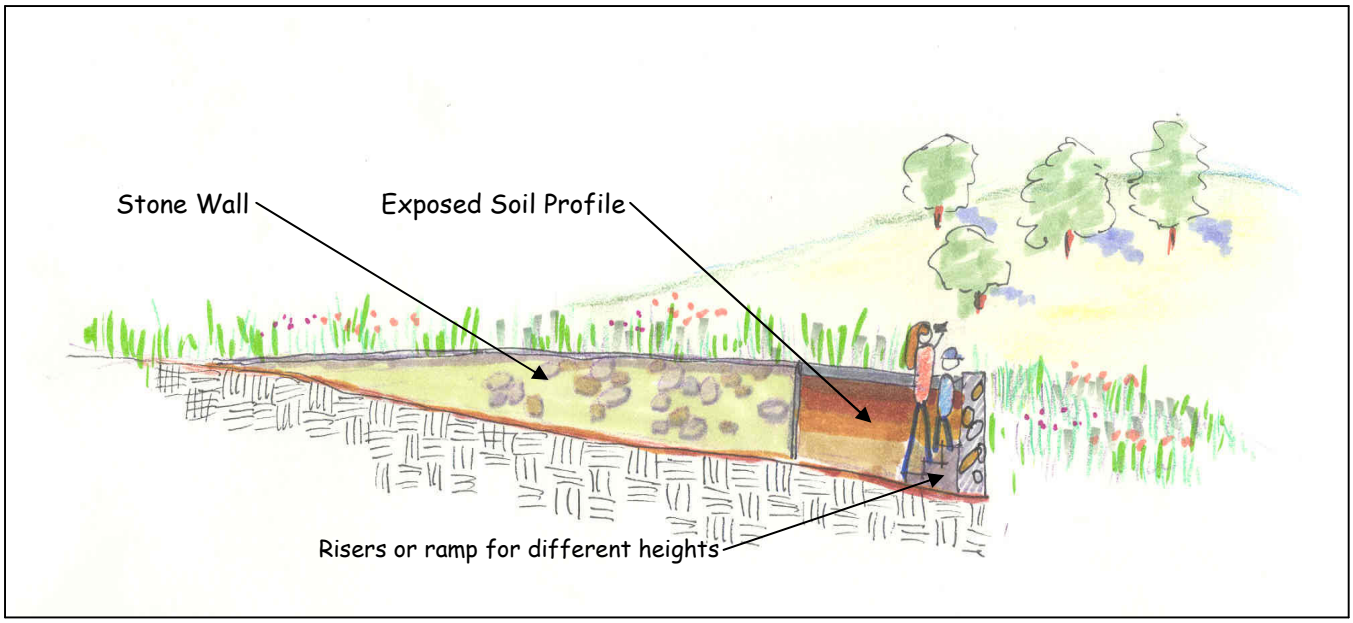
- The Mason Farmstead may act as a transition from the city to the country. By attending events at the Farmstead visitors who are not be initially interested in the natural resources aspect of the Park may learn about it and Rose Lake Marsh.
- The Mason Barn and outbuildings could house a volunteer center, a nature center, a gallery, a community room, and a group camping lodge where water, restrooms, and a kitchen are available. Hearty Gardens are expanded by adding another gardening area and refurbishing the quarter moon shed into a garden shed. A remote video camera could be installed along the marsh for viewing of marsh birds from the barn or nature center.
- Alternatively or at first, the farm buildings could be maintained in their existing condition. The general public rarely has the chance to explore a farmstead and many appreciate the opportunity and memories.
- The log cabin remnants within the house may be exposed on site or moved and preserved in a display on the history of Jefferson County.
- A picnic shelter is placed near the barn with an open play/ball play space.
- The park drive extends west of the farm buildings to the top of the first hill to a covered overlook with benches. A few picnic tables are placed to take advantage of the view. A hard surface bicycle/pedestrian path adjacent to the roadway to the overlook would have a length of 0.75 miles from Banker Road. A sledding hill is just east of the overlook for winter use. A limited number of rustic campsites could be located just north of the overlook and screened with native tree and shrub plantings.

Covered Overlook

- A hard surface bicycle/pedestrian path leads further into the park to a small shelter with a few tables overlooking Rose Lake Marsh. Visitors may park their bikes here and enjoy the hiking trails or the view of the marsh from the shelter.. A bicycle path loops through the savanna. The length of the bike path from Banker Road including the savanna loop is 1.25 miles.
- A trail from the small shelter goes to a marsh overlook deck hidden within the savanna.
- Mowed perimeter and interior trails total 4.4 miles for avid hikers and bird watchers and feature wildlife viewing blinds overlooking the wetland restoration and Rose Lake Marsh. A viewing area near Banker Road takes hikers to a good view of the Farmstead rural scene. Deliberately planted native trees and shrubs screen the neighbor to the south and add some interest to the perimeter trail along Jones Lane enhancing the entry experience. Native trees and shrubs are planted between trails and the park drive for screening and interest.
- A seasonal trail is proposed on the south side of the wetland restoration. The trail would be closed during the nesting season.
- A sunken viewing blind is located on a knoll in the Jefferson County Recreation Area in order to preserve the profile of the hill and provide hikers with a unique experience and prairie level view. The blind could feature an exposed soil profile and other educational information. This blind is about 700 ft from the hilltop overlook and parking lot and 0.35 miles from the Mason Barn.
- A gravel road leads to a small gravel parking lot, a trailhead, and possibly a very rustic overnight lodge overlooking the wetland scrape. This lodge is intended for overnight groups and perhaps nature education. The design of the lodge should blend in or even disappear within the savanna habitat – perhaps with a low-slung prairie grass roof. A grassy path leads to the lodge from the

parking lot for drop-offs only. A few rustic tent camping sites may be tucked into the savanna and screened by shrubs.

- Bicycles may eventually enter the park from Hoard Road past the gravel parking lot. The distance from the south edge of the park to the Mason Farmstead on this route is about 0.50 miles.
- Management activities should continue in the prairie, savanna, and wetlands.
- Detailed species inventories and research should be initialed.
- A naturalist position would enhance education, habitat restoration, and policing of the park.



Sunken Viewing Blind Cross Section

Figure 4.3

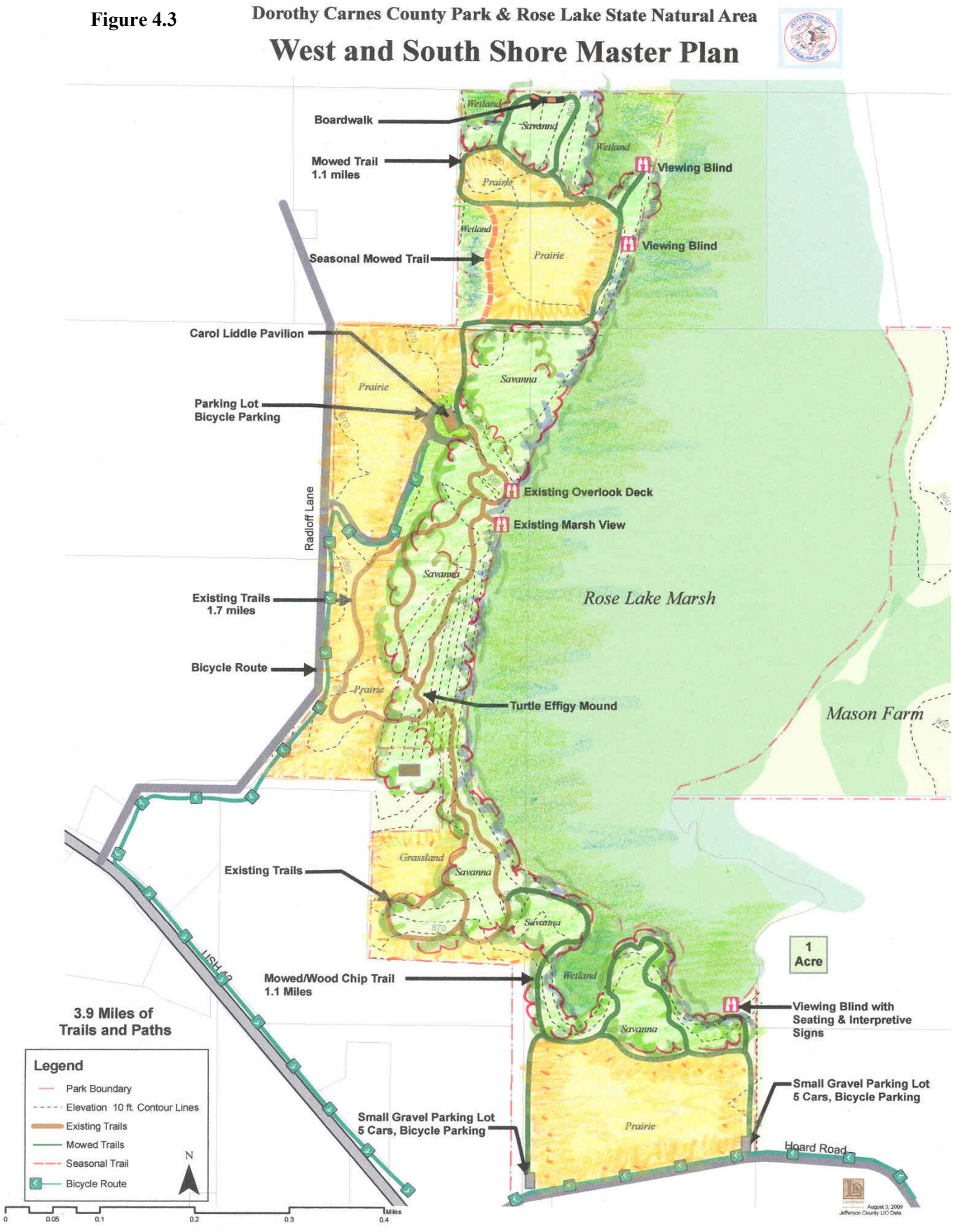
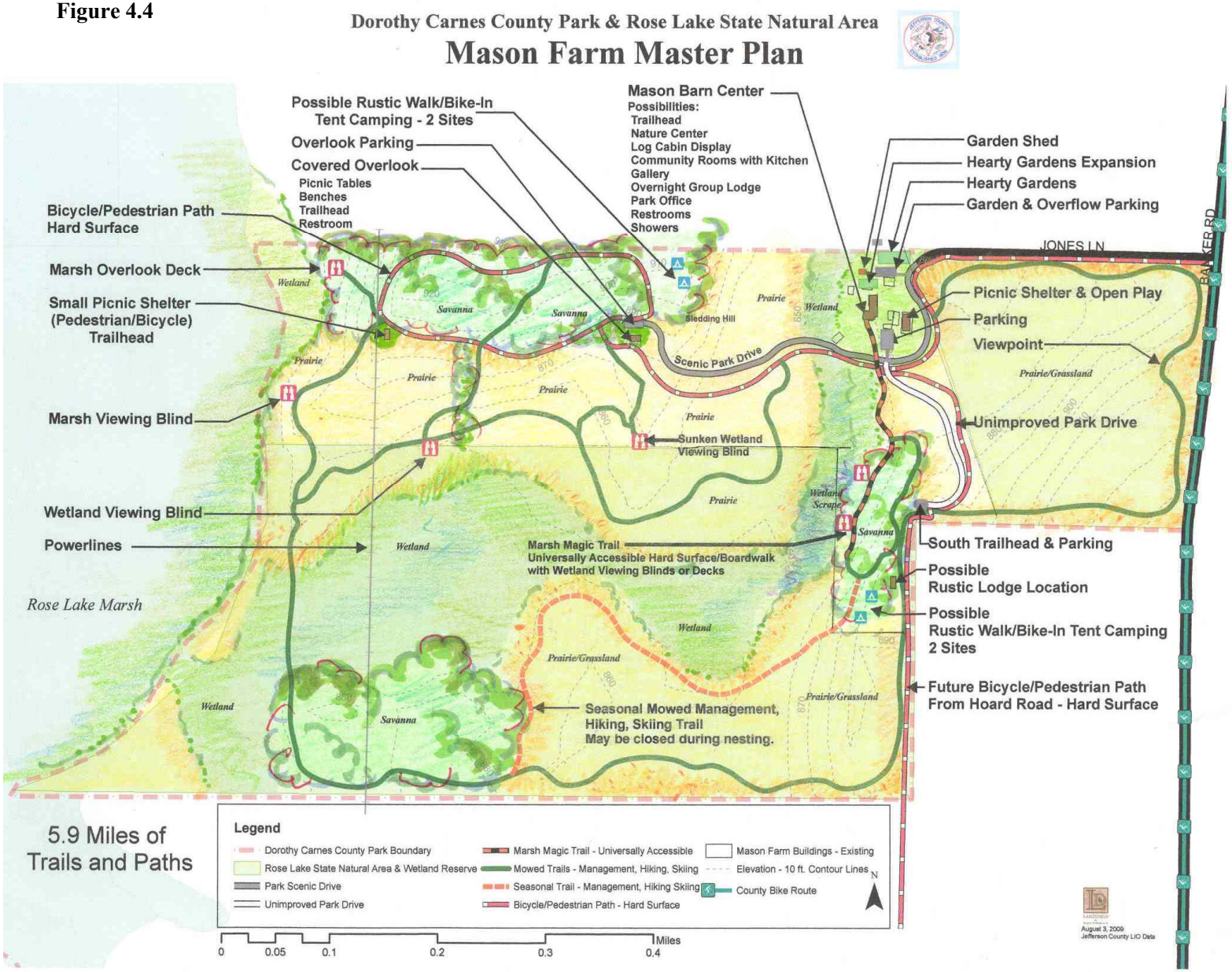

Dorothy Carnes County Park & Rose Lake State Natural Area
West and South Shore Master Plan
Boardwalk
Mowed Trail
1.1 miles
Seasonal Mowed Trail
Carol Liddle Pavilion
Parking Lot
Bicycle Parking
Radloff Lane
Existing Trails
1.7 miles
Bicycle Route
Existing Trails
Mowed/Wood Chip Trail
1.1 Miles
Small Gravel Parking Lot
5 Cars, Bicycle Parking
Viewing Blind
Viewing Blind
Existing Overlook Deck
Existing Marsh View
Turtle Effigy Mound
Viewing Blind with
Seating & Interpretive
Signs
Small Gravel Parking Lot
5 Cars, Bicycle Parking
Hoard Road
Rose Lake Marsh
Mason Farm
Wetland
Savanna
Prairie
Grassland
1
Acre
3.9 Miles of
Trails and Paths
Legend
Park Boundary
Elevation 10 ft. Contour Lines
Existing Trails
Mowed Trails
Seasonal Trail
Bicycle Route
N
0
0.05
0.1
0.2
0.3
0.4
Miles
August 3, 2009
Jefferson County LIO Data

Figure 4.4


Dorothy Carnes County Park & Rose Lake State Natural Area
Mason Farm Master Plan
Possible Rustic Walk/Bike-In Tent Camping - 2 Sites
Overlook Parking
Covered Overlook
Picnic Tables
Benches
Trailhead
Restroom
Mason Barn Center
Possibilities:
Trailhead
Nature Center
Log Cabin Display
Community Rooms with Kitchen
Gallery
Overnight Group Lodge
Park Office
Restrooms
Showers
Garden Shed
Hearty Gardens Expansion
Hearty Gardens
Garden & Overflow Parking
JONES LN
BARKER RD
Bicycle/Pedestrian Path Hard Surface
Marsh Overlook Deck
Small Picnic Shelter (Pedestrian/Bicycle) Trailhead
Marsh Viewing Blind
Wetland Viewing Blind
Powerlines
Rose Lake Marsh
Picnic Shelter & Open Play
Parking
Viewpoint
Unimproved Park Drive
Scenic Park Drive
Sledding Hill
Sunken Wetland Viewing Blind
Marsh Magic Trail
Universally Accessible Hard Surface/Boardwalk with Wetland Viewing Blinds or Decks
South Trailhead & Parking
Possible Rustic Lodge Location
Possible Rustic Walk/Bike-In Tent Camping 2 Sites
Future Bicycle/Pedestrian Path From Hoard Road - Hard Surface
Seasonal Mowed Management, Hiking, Skiing Trail May be closed during nesting.
Wetland
Savanna
Prairie
Prairie/Grassland
Wetland Scrape
5.9 Miles of Trails and Paths
Legend
Dorothy Carnes County Park Boundary
Rose Lake State Natural Area & Wetland Reserve
Park Scenic Drive
Unimproved Park Drive
Marsh Magic Trail - Universally Accessible
Mowed Trails - Management, Hiking, Skiing
Seasonal Trail - Management, Hiking Skiing
Bicycle/Pedestrian Path - Hard Surface
Mason Farm Buildings - Existing
Elevation - 10 ft. Contour Lines
County Bike Route
N
0
0.05
0.1
0.2
0.3
0.4
Miles
August 3, 2009
Jefferson County LIO Data

4.5 Master Plan Details

Details for the West and South Shores and the southern portion of the Mason Farm are described under Natural Area Design Guidelines. This section provides design details for the Jefferson County Recreation Area portion of the Mason Farm. Additional details for wildlife viewing blinds and trail construction are given in Chapter 6 Guide to Design – Wildlife Viewing and Trails.

Jefferson County Recreation Area Grants

The Jefferson County Recreation Area was purchased with a WDNR Stewardship Urban Green Space grant. The purpose of the grants is to "provide open natural space within or in proximity to urban areas; to protect from urban development areas that have scenic, ecological or other natural value and are within or in proximity to urban areas; and to provide land for noncommercial gardening for the residents of an urbanized area" for nature-based recreation.

This area features recreational activities and facilities that are compatible with the natural values of the park.

Jefferson County Recreation Area Use
The Recreation Area includes the Mason Farmstead, the highest point in the park, and the Carol Liddle pavilion.

The following uses have been designated in the Recreation Area:

- Hiking
- Bicycling on hard surface paths
- Cross Country Skiing
- Snowshoeing
- Pleasure driving
- Rustic Tent Camping and Group Camping
- Picnicking
- Open play
- Nature Study
- Research & Monitoring
- Habitat Restoration
- Nature Education
- Photography
- Painting and drawing
- Gardening
- Community events
- Dog walking on-leash only currently allowed.
- Other educational and nature-related activities.

The following facilities are included in the Master Plan:

- Hiking trails
- Boardwalk
- Bicycle/Pedestrian paths
- Park drive
- Parking
- Shelters

- Overlook decks
- Wildlife Viewing Blinds
- Restrooms
- Informational and Interpretive Signs
- Open Play Fields
- Water pumps and wells
- Hearty Gardens
- Possible restoration and/or refurbishment of Mason Farm buildings
- Possible rustic group overnight lodge
- Bridge

Access
Dorothy Carnes County Park can be accessed by car and bicycle from Banker Road via Jones Lane (a Town of Jefferson roadway), and USH 12 from Hoard Road and Radloff Lane. There are actually four Park access points with parking: the Mason Farmstead, the Carol Liddle Pavilion, and two future parking areas along Hoard Road.

Currently Banker Road is a County-designated bicycle route between Fort Atkinson and Cambridge. A future bicycle route is suggested along Hoard Road. Bridges will be built at the STH 26 by-pass and Hoard Road and Banker Road during the expansion of the by-pass to four lanes. This will improve the accessibility to Dorothy Carnes County Park for bicyclists and pedestrians.

A bicycle/pedestrian route from Hoard Road through the Frohmader property to the park is suggested if land or an easement can be acquired.

Trails
A total of 5.9 miles of trails are proposed on the Mason Farm. Trail placement guidelines area as follows:

- Many of the trails shown in the Master Plan are mowed or woodchip hiking trails that double as management trails and fire breaks between different types of plant communities and habitat.
- The trails do not ring each feature or habitat but are located on one side or the other, providing more undisturbed habitat and fewer paths for predators but allowing visitors to experience different types of habitat.
- Trails are located away from areas that seasonally flood to prevent damage and extra maintenance.

Bicycle/Pedestrian Paths
Several miles of hard surface bicycle/pedestrian paths are proposed. Though the hard surface of the path may not erode, it does not allow water infiltration and actually increases water speed and volume adjacent to it. These paths must also be carefully designed, see guidelines in Chapter 6. Some areas may be too steep or sensitive to construct a hard surface trail that requires excavation, base courses and heavy equipment to bring materials or to surface the trail.

Boardwalk
A universally accessible boardwalk with viewing platforms is proposed for the Marsh Magic Trail. The boardwalk may be constructed at a shop and brought to the site. A curb or railings will be needed ensure safety for wheelchairs and strollers. For good visibility, wildlife viewing blinds and platforms should take into consideration the height of a person in a wheelchair or seated and children. Benches should be placed along the route so people may rest and enjoy the view.

Viewing Blinds
Viewing blinds are detailed in Chapter 6. Natural, non-reflective materials are suggested such as stone, wood, logs, and branches. Temporary or short term blinds could consist of piled logs or round bales. Viewing blinds should be situated where the approach can be screened because wildlife reacts to movement. Public comments asked that shoreline views be free of human contrivances. The blind itself could be screened from view by shrubs or marsh and prairie grasses.

Shelters
The Carol Liddle Pavilion, right, honors the benefactress of the park, which is named after her mother, Dorothy Carnes, who loved to explore the natural areas of Jefferson County.

The Carol Liddle Pavilion was specifically designed for this site in the prairie at the edge of the woods with supports that reflect the adjacent tree trunks and the agricultural heritage of Jefferson County. A wall of native stone frames a large window overlooking the prairie.

Restrooms are made of the same wood. While a coherent architectural style is desirable, new shelters, overlooks and rustic group overnight lodge should also reflect their particular location and existing landscape. The public commented that they would like the buildings to remain secondary to the landscape and not infringe on the views of the marsh from either side.

Mason Farm Shelters
The primary shelter location on the Mason Farm is at the Farmstead. The shelter should be complementary to the remaining farm buildings or one of the buildings may be refurbished into a shelter. An open play area should be available from this shelter.

A covered overlook with benches and a few picnic tables is suggested over looking the wetland and a small shelter for bicyclists and hikers is suggested on the hill overlooking the Marsh.

Shelter, Viewing Blind, and Overlook recommendations:
- Use natural materials like wood and stone that blend with the natural colors.
- Make the facility look like it has always been there.
- Maintain the natural ridgelines.
- Avoid reflective materials that attract attention.
- Screen parking from other areas of the park.

Mason Farmstead Building Options:
- Maintain exterior as an original farmstead for historical and cultural purposes.
- Retain some of the buildings and refurbish as usable space
- Expose the log cabin walls and build a replica in place or move the log cabin walls to another site for display.
- Nature center and naturalist's office
- Certified kitchen associated with Hearty Gardens
- Volunteer Center and storage
- Community Room
- Gallery or display space
- Overnight lodge for groups or families
- Restrooms

- Garden shed
- Picnic shelter and open play
- Parking

Camping

- Two kinds of camping have been proposed: rustic walk-in tent camping and an overnight group or family camping lodge. Camping has been requested by the public, particularly park users from outside of Jefferson County, and could create a revenue source for the County. Management needs would also increase.
- Potential areas for rustic walk in tent camping are the first ridge west of the Mason Farmstead where campers could access parking and restrooms at the Overlook. Another potential campsite area is the savanna on the knoll south of the Mason Farmstead above the wetland scrape. This site would be accessible from a small gravel parking lot and possibly a bicycle/pedestrian path from Hoard Road.
- Both camping areas would need to be screened from trails by using native species.
- A group camping lodge could have appeal for both groups such as scouts and families for an overnight experience.

Draft Concept Summary

Two draft concepts for the master plan were developed, the Marsh Magic Concept and the Marsh Forward Concept. These concepts were viewed and commented on by the public and the Steering Committee. Details on the public comments are found in Chapter 2 Public Participation.

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[1] Oberbillig, Deborah R. *Providing Positive Wildlife Viewing Experiences*. April 2001. Colorado Division of Wildlife Publication. Watchable Wildlife Inc

CHAPTER 5 GUIDE TO DESIGN
ROSE LAKE STATE NATURAL AREA

5.1 Rose Lake State Natural Area Description

Rose Lake marsh and portions of Dorothy Carnes County Park were designated a State Natural Area (SNA) by the WDNR in 2006. State Natural Areas are administered within the WDNR Bureau of Endangered Resources. SNAs protect outstanding examples of native natural communities, significant geological formations and archaeological sites. More than 90% of the plants and 75% of the animals on Wisconsin's list of endangered and threatened species are protected on SNAs. The Jefferson County Parks Department owns and maintains the SNA portion of the park. The WDNR may provide some management recommendations. Grant conditions may be connected with each parcel as well.

Rose Lake State Natural Area in early spring.

The Rose Lake SNA encompasses 480 acres, including much of the marsh, see Figure 5.1. The designation serves to protect Rose Lake marsh, the surrounding uplands and the common and uncommon plants, birds, waterfowl, animals, and amphibians that are found here. Native American effigy mounds are also evident and protected in Dorothy Carnes County Park.

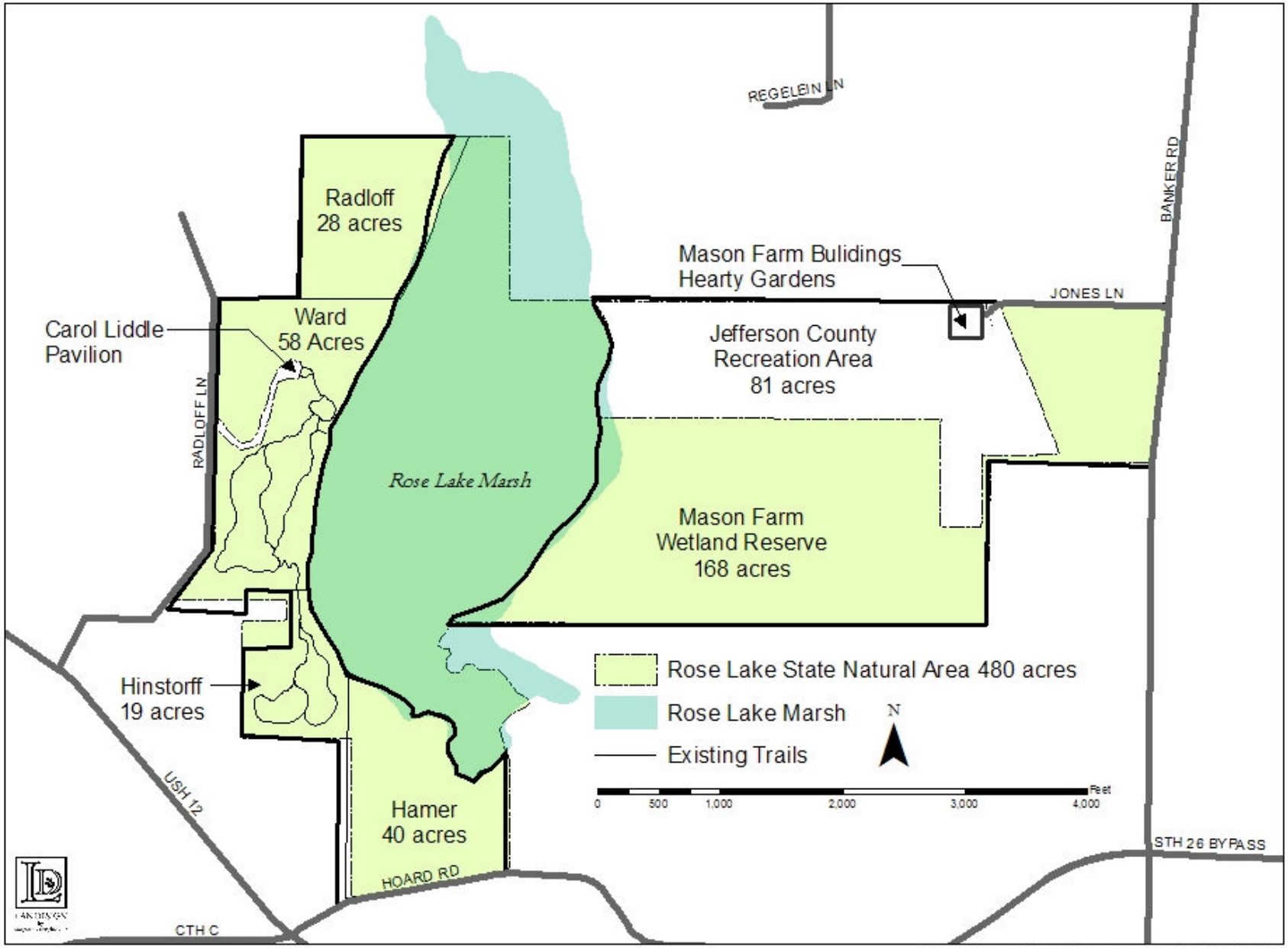
Rose Lake is a shallow, hard water seepage lake surrounded by wetlands, oak openings, and steep hills that provide fantastic views of the lake.[1] With a maximum depth of 5 feet, Rose Lake contains a submerged aquatic plant community dominated by Illinois pondweed, grass-leaved pondweed, and coon's-tail. Other aquatics include common water-milfoil, common pondweed, comb pondweed, and common bladderwort. Common and star duckweed with common water-meal float on the surface. The west side of the lake is dominated by a large floating mat of American woolly-fruit sedge, blue-joint grass, and spike-rush. The exposed mud flats attract numerous shorebirds such as pectoral sandpiper, least sandpiper, solitary sandpiper, and lesser yellowlegs.

The lake and surrounding wetlands are also important breeding habitat for black tern (*Chlidonias niger*), black-crowned night-heron (*Nycticorax nycticorax*), and redhead (*Aythya americana*). Other breeding birds are Sandhill crane, great blue heron, pied-billed grebe, American coot, common moorhen, blue-winged teal, ruddy duck, tree swallow, bank swallow, and marsh wren. Large numbers of yellow-headed blackbirds also nest here. American white pelicans began using the wetland in 2003 when over 800 were recorded.

Soft-stem bulrush and cat-tails ring the north, south and east shores. Numerous freshwater sponges and a diverse dragonfly/damselfly population indicate a lack of serious water quality problems. The wetlands are also rich in wildlife with many species of mammals, reptiles, and amphibians. Prairie, savanna, and wetland habitats are being restored around the lake. The marsh is a system of wetlands and uplands that provides food, cover, and nesting areas for shorebirds and migratory waterfowl. Prairie and grassland birds frequent the uplands and some waterfowl nest there.

Figure 5.1

Dorothy Carnes County Park & Rose Lake State Natural Area



5.2 Rose Lake State Natural Area Boundary and Map

The Rose Lake State Natural Area is depicted in Figure 5.1. The SNA (in light green) encompasses all but 81 acres of Dorothy Carnes County Park on the Mason Farm and the area along the driveway and around the Carol Liddle Pavilion on the Ward Parcel. The SNA is a voluntary designation Jefferson County has entered into and lands may be removed from the designation by request. The SNA on the Mason Farm parcel is also in the USDA Wetland Reserve Program.

5.3 Vision and Goals

Vision
The long-term vision for the Rose Lake State Natural Area is a functioning ecosystem that provides contiguous high quality marsh, wetland, and prairie, savanna, and grassland habitats for all its inhabitants.

Goals
In order to accomplish the long-term vision, goals have been listed. Jefferson County will work with the WDNR, the Madison Audubon Society, the Friends of Rose Lake, and others to accomplish these goals.

- Inventory existing species.
- Develop management plans for each type of habitat.
- Develop a monitoring plan to gauge changes in water quality and species diversity.
- Create management trails that are primarily used for access and fire breaks but that can also be used for hiking and cross-country skiing.
- Add educational components such as interpretive signs, volunteer naturalists, screened viewing blinds, and ultimately a nature center outside of the SNA.

5.4 Rose Lake State Natural Area Use

The Rose Lake State Natural Area is primarily intended to protect pristine natural resources and water quality. WDNR wildlife habitat and other grant agreements contain certain conditions of use. Essentially the use of the State Natural Area is for natural and cultural resource protection, restoration and improvement. The SNA is open to the public for hiking, skiing, snowshoeing, photography, nature study, and berry picking and similar pursuits. The following uses are encouraged in the State Natural Area:

- Restoration activities such as removing invasive species, seed collection, and planting natural species.
- Management trails may provide access to the different habitats and double as fire breaks for areas where controlled burns are a management tool. A bluebird trail with bird houses may be possible. Some trails may be closed during nesting season. Figure 5.2 depicts the possible management zones and trails.
- Species inventories.
- Nature study and research, a permit may be required.
- Recreation such as hiking, cross-country skiing, photography, nature study, and contemplation that does not degrade the natural resources.
- Discreet and well constructed permanent and/or movable wildlife viewing blinds possibly with interpretive materials.
- Two small parking lots may be located along Hoard Road on the Hamer parcel.
- Dogs on leash are allowed in Jefferson County Parks.

Figure 5.2


Dorothy Carnes County Park
Rose Lake State Natural Area
Proposed Management Units and Trails
By Mark Martin, WDNR Bureau of Endangered Resources
Wetland MU
Wetland MU
Savanna MU
Viewing Blind
Prairie MU
Savanna MU
Prairie MU
Wetland MU
Viewing Blind
Management Trail Only
Prairie MU
Savanna MU
RADLOFF LN
Viewing Blind
Jefferson County Recreational Activity Area
Remove Fence
JONES LN
BANKER RD
Prairie/Grassland Management Unit
Prairie MU
Prairie Management Unit
Wetland Management Unit
Remove Fence
Prairie MU
Savanna MU
Wetland MU
Savanna Management Unit
Prairie/Grassland Management Unit
Remove Fence
Prairie MU
Savanna MU
Viewing Blind
Savanna MU
Prairie Management Unit
Parking
USH 12
STH 26 BY PASS
Jefferson County LIO Data
Legend
Jefferson County Recreation Area
Exisitng Trails
Proposed Management Use and Hiking Trails
Proposed Management Units
N
0
420
840
1,680
2,520
3,360
Feet

5.5 Design Guidelines

Design Philosophy
Natural resource protection and habitat improvement are the primary goals within the Rose Lake State Natural Area. Park visitors may greatly appreciate the pristine natural resources of the park or may have had very little exposure to a many-faceted marsh ecosystem. The design guidelines in this section hope to lay a foundation for appropriate and enjoyable public use of the SNA.

The design guidelines focus on minimizing disturbance to the flora and fauna of the SNA, particularly migrating waterfowl, and also encourage visitors to learn how to "think like an animal" and to use all their senses to see, hear, feel, and smell the natural world. White pelicans and an albino red-tailed hawk can be exciting discoveries for expert and casual bird watchers alike.

Habitat and Management Units

- A detailed species inventory and monitoring program should be pursued.
- Management plans should be developed and followed for each management unit, including prairie, savanna, grassland, and wetland.
- Parks staff should attend educational sessions on natural areas management to learn of the newest techniques.
- Dogs running loose may be detrimental to nesting birds and wildlife and enforcement of the dogs on leash policy or a policy banning dogs from the SNA may be considered.
- Volunteer naturalists or a permanent naturalist position should be considered to assist visitors in learning about the wetland and marsh ecosystem.
- Limited hunting by permit may be considered if the deer population becomes detrimental to native plant communities and food sources for other species.

Trails

- The SNA is open to the public for hiking, cross-country skiing, snowshoeing, nature study, bird watching, photography, and similar pursuits that minimize disturbance.
- Management trails the double as hiking, skiing, or snowshoeing trails are compatible with the SNA designation.
- Mow trails 10 feet wide.
- Cross-country skiing trails may be groomed. Design trails with skiers in mind, especially curves near the base of hills.
- Woodchip trails may be more suitable in savanna management areas where sunlight may be limited.
- Situate trails on one side of a habitat, not ringing the habitat to reduce disturbance.
- Locate trails behind shrubs or trees near water bodies to reduce disturbance to waterfowl.
- Short boardwalk sections may be utilized where necessary, such as over the swales on the Radloff parcel. Water should flow unobstructed under the boardwalk. Boardwalks can be built in the shop and then moved in place and could be a volunteer activity.
- Make trails undulating to create more interest. Trails can travel toward a focal point or landmark for more interest or water can come into view and then disappear.


A set-in-place boardwalk.

- Native shrubs between the trail and property line could screen the view of neighbors and create more separation.
- Some trails may be closed during nesting season to limit disturbance.
- Judiciously locate trails with the assistance of naturalists since predators may use trails to reach their prey.
- A bicycle path from Hoard Road to the Mason Farmstead may pass through the SNA at some point in the future.

Viewing Blinds

- Viewing blinds hide the silhouette of humans so that waterfowl and birds are not disturbed. The approach to the viewing blind should be screened by vegetation so that the birds or wildlife do not see people approaching.
- Viewing blinds should be solidly and thoughtfully crafted.
- Seating and interpretive materials may be provided in some blinds.
- Viewing blinds are located on the Radloff and Hamer parcels in the SNA as well as in the Jefferson County Recreation Area.
- The viewing blind on the Hamer parcel will be larger and more accommodating as it is a short distance from the parking lot on Hoard Road to this location. Informational materials will be provided.

Marsh Access

- Direct access to the marsh is not encouraged to limit disturbance and protect pristine views of the marsh.
- A marsh overlook deck is provided on the Ward parcel as is a short spur trail to the edge of the marsh.
- A waterfowl viewing blind is located on the Hamer parcel along the water for the closest access to the marsh.
- Canoeing or kayaking are not encouraged. Special guided trips or marsh access for research purposes may be considered on a case by case basis by the Jefferson County Parks Committee.
- Duck hunting is allowed on the marsh however hunters may not access the marsh through Dorothy Carnes County Park and Rose Lake State Natural Area.

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[1] Wisconsin Department of Natural Resources Bureau of Endangered Resources http://dnr.wi.gov/org/land/er/sna/sna538.htm.

Chapter 6 Guide to Design Wildlife Viewing and Trails

This chapter provides detailed suggestions on sustainable trail building and connecting park visitors to wildlife. The trail suggestions are taken from the International Mountain Biking Association which advocates multi-use trails built in a sustainable manner. The suggestions offered apply to all types of trail construction.

Several publications are copied or paraphrased in this section that give suggestions for successful wildlife viewing and building trails and wildlife viewing blinds. Those publications are:

Providing Positive Wildlife Viewing Experiences by Deborah Richie Oberbillig and the Colorado Division of Wildlife and Watchable Wildlife, Inc.

A Guide to Wildlife Viewing and Photography Blinds – Creating Facilities to Connect People with Nature by Deborah Richie Oberbillig and the Colorado Division of Wildlife.

Managing Mountain Biking, IMBA's Guide to Providing Great Riding. 2007. Edited by Pete Webber. Published by the International Mountain Biking Association.

6.1 Positive Wildlife Viewing Experiences

Definition of a positive wildlife viewing experience: The wildlife watcher slows down and quietly discovers a wild animal without altering the animal's behavior. As a result of this rewarding experience, the watcher gains a greater appreciation of the natural world.

Birdwatching growth exceeds hiking, bicycling, skiing, and golf. When providing wildlife viewing areas think *experience*. Seeing tracks, nests, scat and other signs of animals is also wildlife viewing. Connecting people to wildlife in a positive way leads to conservation. Viewing birds and wildlife is fun, offers a learning experience, and incorporates and demands ethical behavior in that the presence of a watcher should be a neutral influence upon the animal. Awareness of human presence is acceptable, but changing natural behavior is not. The greatest task is to help people cross the line from passive observers to active participants in conservation.

People may seek different experiences at the park. These designations do not represent individuals but the experience they are seeking. **Different parts of the park can accommodate different kinds of experiences:**

Type 1: **High involvement experience**. They enjoy solitude and place a very high importance on new and different experiences. This group wants info about wildlife and most likely to become research volunteers.

Type 2: **Creative experience**. They link wildlife viewing with photography, painting and other creative pursuits. The tend to like social experiences more than Type 1 and pursue fewer outdoor experiences.

Type 3: **Generalist experience**. Combine wildlife viewing with other activities. This group seeks tranquility, relaxation, new and different things, and family activities. They are the least likely to obtain viewing guides, take guided tours, or check out audio players.

Type 4: **Occasionalist experience**. This group is mostly constrained by lack of knowledge about wildlife viewing, particularly where and when to go. They are the least likely to combine wildlife viewing with hiking.

Accessibility for the generalist and occasionalist experience and for the less able can mean videos, photographs, or a remote camera set up at a visitors' center like the Mason Farm buildings.

Human impact on wildlife, birds and waterfowl
The less you interrupt the natural flow of things, the more creative of imaginative our viewing can be. Help watchers slip in and out of the natural world with grace. The more separated people become from nature, the less they know how to walk quietly, to use all their senses, to learn to read communication signs of wildlife, and to humbly respect the other species sharing and depending on nature.

It is hard to understand the negative affect a simple hike can have on wildlife. Humans impact wildlife by exploitation, disturbance, habitat modification, and pollution. Disturbance can cause birds to leave their nests and never return or return after a predator has eaten the eggs. Animals may leave a favorite watering hole or nesting site due to repeated disturbance. Increased heart rate of wildlife due to disturbance can result in immune system problems. Feeding wild animals human food can kill them or make them unafraid of humans and cars, which can lead to their death.

When people understand that their actions can lead to the death of wildlife, most are more than willing to listen.

Managing People in the Park
Sometimes when use is predictable, like following a trail or boardwalk or at a viewing deck, wildlife will accept human presence.

Ways to managing people:
- The park can be closed one or more days a week to give wildlife a break from heavy visitation.
- Roads or trails can be closed during sensitive seasons.
- A migratory bird festival in Jefferson County could focus interest and add to the economy.
- Offer guided tours to special places in the park.
- Charge people to use a camera blind or a special blind during certain times of the year, require reservations for dawn or dusk viewing.
- A full-time naturalist could continually educate visitors and train volunteers to educate visitors who are disturbing wildlife.
- Incorporate the interpretive themes or messages into the design from the beginning.
- All wildlife viewing facilities should contribute to responsible behavior by concentrating people where you want them, screening sensitive areas, meeting different visitor expectations and facilitating a quiet, slow-paced, educational adventure in nature.
- Instead of signs, place an aesthetic structure with a viewing peephole that directs the viewer's focus to a rookery or nest.
- Place nest boxes where they enhance viewing for visiors.
- Without a convenient way to see animals up close, the temptation to advance into an animal's space can become irresistible to some people, especially without knowledge of their impact upon wildlife or how many other people have chased off that bird or mammal in one day.
- Use trees, shrubs, boulders to screen viewers so that the wildlife cannot see their silhouettes. Take advantage of natural vegetative screening to protect sensitive areas while ensuring some views as well.
- Align a trail on an established human edge such as an old roadbed or timber cut.
- Wind a trail to where the wildlife is, not a straight path, to screen people from the animals view and to send a signal to visitors that this is a place to slow down.
- Boardwalks, decks and towers concentrate people where you want them, ideally with the least impact and maximum viewing opportunities.
- Visitor's centers should be gateways to the outdoors, not destinations.
- Perch a nature center above the marsh with a good view of it.
- Writing positive wildlife viewing messages only works when words show rather than tell and relate to the experience of the viewer. Give viewing tips or tools, not rules, such as "Binoculars safely bring you close to wildlife without disturbing them" or "Bear in mind when watching wildlife that you are entering the animals' home and should conduct yourself as a guest". When visitors know why to behave in a certain way, they are more likely to go along with a request than might otherwise.
- Hands-on field experience + education = conservation
- Developing a code of ethics for Dorothy Carnes County Park could be part of an education class or a special naturalist walk at the viewing area.

6.2 Decks, Platforms, and Wildlife Viewing Blinds

The Carol Liddle Pavilion used as a bird viewing blind.

Viewing or photographing wildlife is made easier if you are stationary and let the wildlife come to you. The fact is that wildlife subjects are just that--wild, and normally won't allow you to approach closely. Decks or platforms proclaim a destination, a place to enjoy a spacious view and to watch wildlife perhaps from an unusual perspective. Benches, interpretive panels and mounted spotting scopes invite visitors to linger. Strategic placement can also solve management dilemmas by concentrating use. A designated spot for humans helps animals acclimate to people.

Viewing blind basics:

- Consider covered approaches to help birds and animals feel secure.
- Ensure the windows are not opposite each other, so wildlife will no see movement.
- Design windows so viewers will not be tempted to point their spotting scopes through the windows.
- Make sure windows accommodate children and people in wheelchairs.
- Ensure the blind is comfortable.

There are as many types and shapes of blinds as there are creative designers and builders. The blind should be large enough for comfort, made of dark colors so light cannot penetrate and allow shadows to be seen, made sturdy and anchored to the ground to prevent it from blowing away, and placed in the correct habitat and camouflaged to maximize your chances of seeing wildlife. Choosing the correct habitat to place the blind is easier and more effective if you know your subjects' habitat and characteristics.[1] Naturalists can help located the blinds appropriately.

Pre-positioning a blind for some time before you plan to use it. Time for the wildlife to get used to the presence of the blind is important. The blind should also be positioned so that the prevailing winds blow from the subject to your blind and not toward the wildlife. Birds are not of concern with this issue. Movement within the blind should be minimal and loud talking prohibited. Blinds not only screen visitors from wildlife but also guide visitors to appropriate places to view wildlife.

Wildlife Viewing Blinds provide the following benefits:

- Blinds protect birds, waterfowl, and wildlife from disturbance. Blinds screen human movement that can affect the natural activities of wildlife. The approaches to the blind should be screened and the interior of the blind should be dark so movement is not seen from the outside.
- Blinds are a visitor management tool. Blinds can concentrae visitors and give them a destination that is an appropriate place to view wildlife and keeps visitors away from sensitive areas. Some birds and wildlife may acclimate to visitor activity over time and some do not.
- Blinds can serve as “prompts” that cue visitors to turn their full attention to viewing nature. Managers
- involved with watchable wildlife and education programs are always looking for ways to engage people in wildlife viewing – to increase awareness of the wildlife and habitat around them. Blinds can be a place to slow down, sit, smell, and listen quietly to the natural world.
- Blinds can offer a new perspective on viewing wildlife and nature. The proposed sunken viewing blind features not only an overlook of the wetland on the Mason Farm, but could also incorporate a plexiglass wall that reveals the soil structure and prairie plant roots to visitors.

Should we build a wildlife, bird or waterfowl viewing blind?

Building a blind may be a great idea if you answer yes to most of the following:

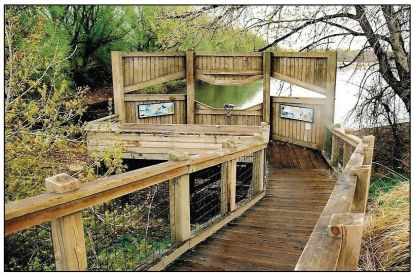
- ✓ A viewing facility will help us meet our site objectives.
- ✓ Wildlife species require, or will benefit from protection from disturbance.
- ✓ Wildlife viewing opportunity is fairly consistent and reliable.
- ✓ A blind serves as a management tool;
- ✓ Facility and approach needed for resource protection

- ✓ Facility can direct or separate visitor user groups
- ✓ A blind will enhance visitor experience:
- ✓ Wildlife viewer or photographer demand (visitors want a blind!)
- ✓ Blind will provide new perspective on nature/wildlife
- ✓ Interpretive media can increase knowledge/appreciation
- ✓ Blind facility can protect visitors from elements
- ✓ Our agency/organization has resources to sustain a safe and satisfying viewing opportunity.

Choosing A Blind:

Photography blinds may be best when:

- ✓ Wildlife use of site is relatively predictable
- ✓ High interest level from photographers
- ✓ Need to protect wildlife from photographer disturbance
- ✓ Need to separate users (by offering both photography and viewing blinds)



Permanent blinds may be best when:

- ✓ Need fully enclosed, concealed blind and approach
- ✓ Wildlife is sensitive to disturbance
- ✓ Wildlife use of habitat is consistent or year-round
- ✓ Visitor use is consistent or substantial
- ✓ Blind is compatible with site
- ✓ Managers can maintain blind

Temporary blinds (seasonal, mobile, portable) may be best when:

- ✓ Wildlife viewing opportunity is seasonal or short-term
- ✓ Visitor use is seasonal or inconsistent
- ✓ Managers desire less impact to site (to habitat or to view)
- ✓ Maintenance resources are limited or site remote
- ✓ Funds are limited (temporary may mean cost savings)

Observation decks or platforms may be best when:

- ✓ Elevation will provide better viewing experience
- ✓ Wildlife is habituated to human activity; it's not necessary to fully conceal viewers
- ✓ Prompting visitors to observe, or guiding visitor traffic is your primary goal; decks and platforms invite visitors to stop and observe

Towers may be best when:

- ✓ Elevation is needed for better viewing
- ✓ Visitors need protection from wildlife
- ✓ The goal is to offer a unique perspective

Blinds That Blend With Nature

The following strategies help the blind and visitors blend with nature and create less disturbance to both wildlife, views, and visitors in other parts of the park.

- ✓ They may help support a positive viewing experience *and* communicate a sense of place.
- ✓ Keep site disturbance to a minimum.
- ✓ Restore native plants around the site.
- ✓ Allow vegetation to grow in close to the approach and the blind (but avoid blocking the view).
- ✓ Build a blind into a hillside or berm.
- ✓ Create an approach trail or boardwalk that winds around trees, rocks and other natural features.
- ✓ Build a blind with materials native to that area.
- ✓ Camouflage a traditional blind with paintings, or native materials.
- ✓ Design a blind to mimic natural features of the landscape: trees, hills, mounds etc.
- ✓ Design a blind to mimic wildlife homes (i.e. beaver lodge, bird's nest).
- ✓ Cut viewing ports in bird or plant shapes; use an artistic approach to communicate the

6.3 Building Trails

The following trail tips are copied from the International Mountain Bicycling Association and apply to multi-use and single use trails:

Contour Trail Tips:

1. Do everything you can to keep the water off the tread, and users on it
2. Build on the contour and use frequent grade reversals - surf the hillside
3. Follow the half-rule: A trail's grade shouldn't exceed half the grade of the sideslope
4. Maximum grade should be 15 percent (except for natural or built rock structures)
5. Average grade should stay under 10 percent (with grade reversals)
6. Route trails to positive control points (viewpoints, water, other attractions)
7. Use bench-cut construction, and excavate soil from the hillside
8. For reroutes, reclaim old trail thoroughly - the visual corridor as well as the trail tread
9. For highly technical trails where grade will sometimes exceed 15 percent, use natural rock, rock armoring or other rock features to add challenge and improve sustainability.

Avoid the Fall Line

Fall-line trails usually follow the shortest route down a hill - the same path that water flows. The problem with fall-line trails is that they focus water down their length. The speeding water strips the trail of soil, exposing roots, creating gullies, and scarring the environment.

Avoid Flat Areas

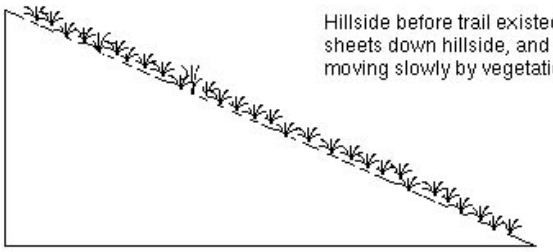
Flat terrain lures many trailbuilders with the initial ease of trail construction. However, if a trail is not located on a slope, there is the potential for the trail to become a collection basin for water. The trail tread must always be slightly higher than the ground on at least one side of it so that water can drain properly.

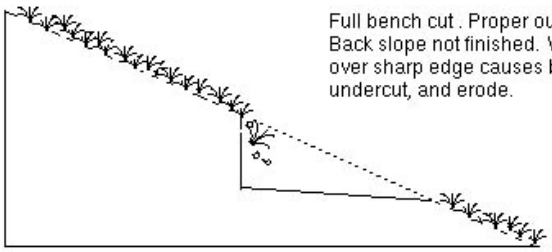
Build Contour Trails With Full Bench Cut And Outslope

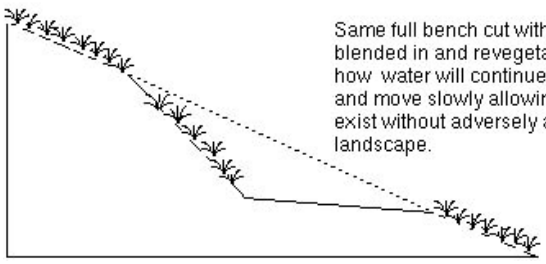
Every person engaged in trail building and maintenance should understand the interrelated concepts of bench cuts and fill slopes, outslope, fall-line versus contour routes, and maintenance by deberming.

A bench cut is the result of cutting a section of tread across the side of a hill. If you look at the side profile of this cut it looks like a bench, hence the name. The two basic designs are known as "full bench" and "partial bench." Full bench construction means that the full width of the tread is cut into the side of a hill. The entire tread is dug down to compacted mineral soil. Viewed in cross-section, the tread angles slightly downhill at 3-5%. This is known as outslope.

Full Bench Construction







A partial or balanced bench means that part of the hill is cut away and the soil that has been removed is placed at the lower edge of the trail to try to establish the desired width. This is known as a fill slope. We have yet to run into an area that did not require a full bench cut.

Full bench design avoids problems inherent in partial bench cuts. Partial bench often requires problematic cribbing (the act of putting logs or rocks on the downhill edge of the trail) to hold the fill soil that is added to the edge of the trail.

The fill soil is soft and uncompacted, often forming a berm, which will cause water to flow down the trail rather than across it. The end result: Your new or reconditioned trail ends up being the poster child for erosion damage. And if a user finds their way onto this soft edge, they can lose their balance and end up off the trail, or push the soft dirt down the side slope causing the tread to terrace or become uneven.

Bench cut and fill relates directly to trail layout. We always recommend building trails that contour across a slope, climbing and descending gradually, rather than running directly up and down the fall line. (The fall line is the most direct route downhill from any particular point.)

Water generally runs down the fall line, and fall line trails provide a conduit to move a lot of water down a hill. Water flowing down a trail will build velocity and will quickly erode deep ruts. Fall line constructed trails erode at a terribly fast rate, are nearly impossible to maintain, and fuel the fires of people who are looking to ban bikes from trails. Too many unskilled riders skid or ride out of control on fall line trails.

On the other hand, contour trail are curvy, fun to ride, easier to maintain, yet still provide significant challenge for even the most skilled riders. Contour trails should be built with outslope so water will sheet across the trail and continue down the hill, rather than diverting into the trail tread and causing erosion. If a drainage problem does develop on a contour, full bench trail, it can be dealt with easily and effectively. Contour, full bench, and gradual trails will require less maintenance and fewer water diversion dips than fall-line, partial bench, or steep trails.

Some time after a trail tread has been properly cut in and outsloped, the tread will settle from compaction. This is normal. However, the lower edge of the tread will not compress as much as the center, creating a berm. Berms can also form from erosion. Fortunately the cure is simple and very effective. Using simple hand tools (McLeod, Pulaski, adz hoe, pick, etc.), remove the berm to create outslope, being careful not to disturb the already compacted center of the trail any more than necessary. Varying by soil types and climate, many trail segments will require another deberming five or more years later. This is perhaps the most common maintenance needed on trails, but also the easiest and most effective.

Sandy Soil Solutions
It is especially important to bench and outslope the trails in sandy soils. If not, the thin layer of topsoil will quickly punch through and cause the tread to become cup shaped, channeling water down the trail. In sandy areas, it helps to add something to harden the tread surface and make it sustainable. If there is a layer of compactable soil on the surface and sand or glacial till (the debris left when a glacier retreats) underneath, then the upper layer can be removed and set aside, then mixed with the sand for the top of the tread. If there is no compactible layer, then other hardening techniques must be applied.

Gradual transitions are essential between changes in trail flow. Abrupt transitions are likely to produce skidding, braking bumps and may even force users off trail.

Flat Terrain. We recommend locating trails on sideslopes whenever possible because flat areas accumulate water. However, if flat terrain is all that's available, twists and turns are great ways to add challenge. Note: serpentine twisty trails can seem artificial or contrived and people may shortcut sharp turns if no obstacle blocks their way. Use trees, bushes, rocks and other natural features to prevent shortcuts. Extremely turny trails won't be successful in open grasslands or forests - the temptation for shortcutting is too great.

Ups and Downs. A turny trail traversing an undulating hillside should include ups and downs. This will improve drainage. Design slight downhills leading into inside turns - it is essential to cross low-lying drainage features with a grade reversal. The trail should gradually descend into drainages and then gradually climb up out of them.

Surf the Contour. When designing a trail across a featureless hillside, include twists and turns to avoid long straightaways. Subtle curves will create gentle ups and downs that add interest.

The Only Effective Solution - Rolling Grade Dips

The only erosion control device that we found that required almost no maintenance and was aesthetically pleasing was the rolling grade dip. It is an adaptation of the dirt water bar. By utilizing the natural materials found on or near the trail, you will be building with materials already suited to that particular climate. Not only will they blend in with the natural surroundings, but properly constructed, they will last. To describe the construction of the rolling grade dip we like to use an analogy conceived by our friend Patrick. Think of a spoon oriented with the handle on the downhill side of the trail tread. It begins with a five to six foot long "spoon" or dip that is dug no more than five or six inches into the tread. The entire downhill side of the dip is opened up for drainage. This promotes high volume drainage with very low water velocity. Water moving slowly is less apt to cause erosion cuts or channeling in the surface of the tread.

Take the excavated soil and pile on the trail at the lower end of the dip a slight hump no more than six to eight inches tall. Think of the part of a spoon where the handle joins the main part of the spoon. It should have a smooth, consistent transition from the center of the dip to the top of the hump; no sharp edges or steep humps. Next complete the "handle" of the spoon by building a ramp that extends eight to ten feet down the trail from the hump.

The hump and the handle should be built in layers. Pack each layer with a McLeod or some other large surface packing device before piling on more dirt. This will keep the center-line from dishing or forming a rut. (This is a good rule to use anytime tread is being built up or restored.) Pack the entire structure and remove any divots or bumps, making it as smooth as possible. Afterwards walk up the trail and observe your handiwork. The rolling grade dip should be barely noticeable.

Hikers won't have to worry about rolling an ankle or slipping. The mass of the dirt in the handle will help support the hump and add years of longevity. If built properly, the only maintenance it will require is the removal of leaves or other debris that will occasionally collect in the dip.

One last tip: If you have to build the hump taller than stated here because of steeper slopes, then use the following formula; for every inch you go up on the hump add one foot to the length of the ramp (the handle). Apply the same to the "dish" of the spoon: If you dig it in deeper, it should be longer. This will keep the structure stable and smooth.

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[1] United States Geographical Survey. Northern Prairie Wildlife Research Center. Building Nest Structures, Feeders, and Photo Blinds for North Dakota Wildlife. http://www.npwrc.usgs.gov/resource/wildlife/ndblinds/blinds.htm

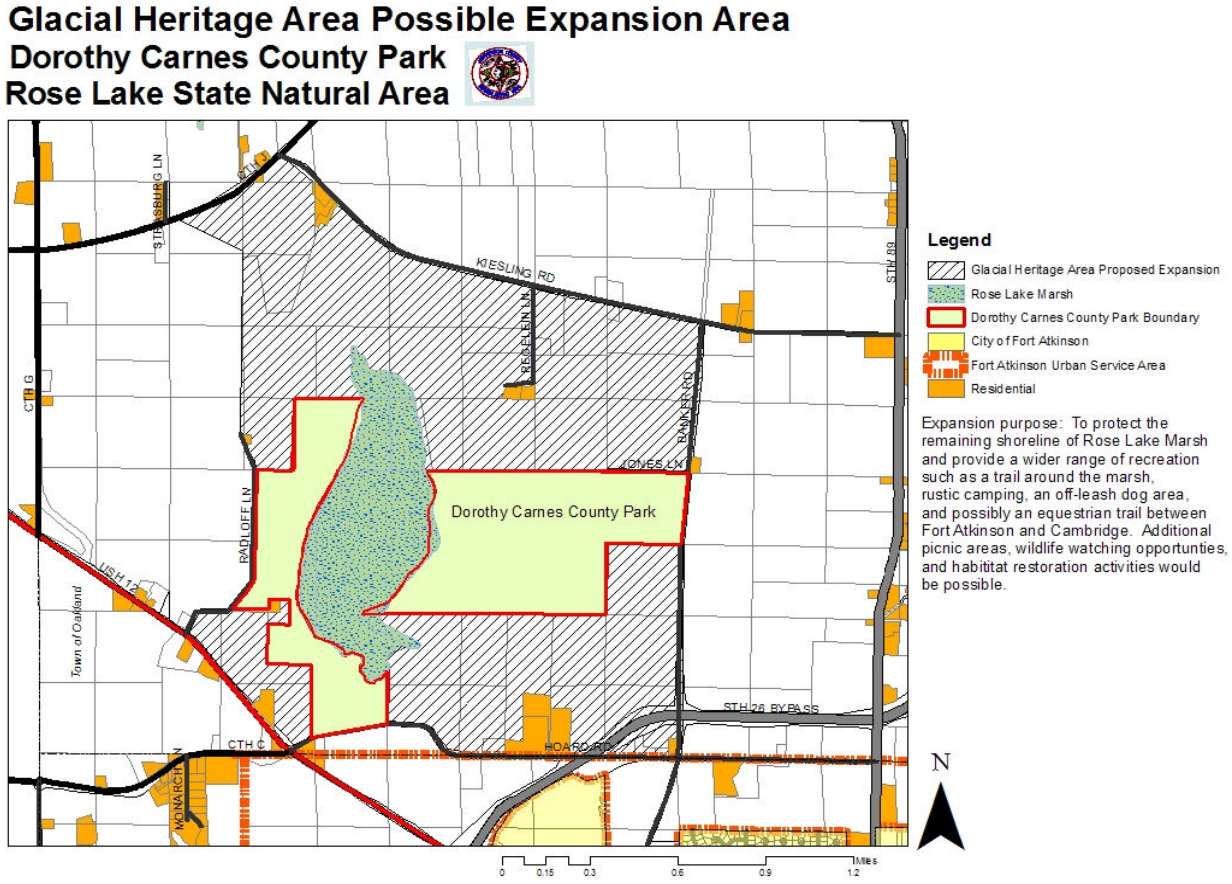
Chapter 7 Future Visions

The 2001 Dorothy Carnes County Park Master Plan suggested strategies to protect the adjacent properties from development in order to preserve the integrity of Rose Lake Marsh and to maintain the rural views surrounding the park. Fee simple acquisition and conservation easements to protect natural, agricultural, and scenic values were suggested.

The some of the adjacent properties have been in the same families for generations and the landowners would like to see their land remain in the family. Hunting on and around Rose Lake Marsh has also been a family tradition.

Acquisition of additional land is a long-term initiative. Jefferson County only acquires land from willing and voluntary sellers.

Figure 7.1



The Glacial Heritage Area Master Plan is slated for approval by the State Natural Resources Board and the Governor In 2009. This plan identifies a string of pearls - conservation parks and State Wildlife Areas connected each other and to cities and villages by off-road trails and paths – for acquisition and protection. Dorothy Carnes Park is one of the "pearls" recommended for expansion.

The proposed expansion area is depicted in Figure 7.1. The WDNR must designate a project boundary in order to have the opportunity to acquire land from willing sellers. Land may not be acquired outside the boundary without amending the plan, therefore potential acquisition areas are often large and boundaries are often set at surrounding roads.

The proposed Dorothy Carnes County Park expansion area is 1,700 acres with a potential acquisition goal of 1,000 acres, 394 acres are already owned by Jefferson County. Jefferson County would consider purchasing only land, not buildings.

Possible facilities and uses for additional lands that were mentioned at public meetings include:

- Connecting the east and south/west sides of the park is a priority. Acquiring a trail easement along the marsh might be an alternative to purchasing an entire property.
- Habitat restoration and protection of Rose Lake Marsh
- A trail around the marsh.
- Large picnic shelters and open play areas
- Fenced dog exercise area
- Additional recreational activities such as mountain biking, archery, disc golf, more hard surface bicycle trails, equestrian trails.
- Marsh overlooks

The Jefferson County Agricultural Conservation Easement Commission is in the process of starting a purchase of agricultural conservation easements program (PACE). The program could also be of assistance for landowners surrounding the marsh who would like to voluntarily donate a conservation easement on their property in return for income tax deductions or apply for the PACE program, which will seek cost sharing from the Wisconsin Working Lands Initiative, WDNR, and federal programs.

Chapter 8 Implementation

Full implementation of the Dorothy Carnes County Park Master Plan will take a number of years and budget cycles. The original Master Plan for the Ward parcel is nearly complete. Prairie and wetland restorations have been implemented and invasive species are being removed from the savanna habitat areas. Mowed trails are found throughout the park.

A long-range timeline is given below and an implementation chart is found on page 8-3.

8.1 Master Plan Implementation Timeline

Years 1 and 2

- Install Park entrance sign at the Mason Farm
- Continue to implement prairie, savanna, and wetland restoration plans.
- Begin species surveys.
- Implement all firebreaks and mowed and woodchip trails.
- Develop a plan for the Mason Farm buildings.
- Install escape gates in the fence around the Mason Farm.
- Install Park entrance signs on Hoard Road.
- Install Hoard Road gravel parking lots and informational kiosks.
- Install one or two parking lots at the Mason Farmstead.
- Expand Hearty Gardens.
- Install bridge west of the Mason Farmstead.
- Add wildlife viewing blinds as labor is available.
- Begin to install interpretive signs.
- Mow sledding hill.
- Acquire adjacent land if it becomes available and is feasible.

Years 3 to 5

- Install wells and water hydrants.
- Build park drives and parking lots at the Mason Farm
- Install hard surface bicycle/pedestrian paths at the Mason Farm
- Build Marsh Magic Trail.
- Build covered overlook and small shelter and restrooms.
- Hire a naturalist
- Develop rustic tent camp sites.
- Build boardwalk on Radloff parcel.
- Continue to build wildlife viewing blinds.
- Connect Mason Farm portion of the park to Hoard Road with a bicycle/pedestrian path.
- Acquire adjacent land if it becomes available and is feasible.

Years 5 to 10

- Implement Mason Farmstead plan.
- Build rustic group camping lodge.
- Continue with invasive species removal, prescribed burns, and species inventories.
- Acquire adjacent land if it becomes available and is feasible.

8.2 Cost Estimate

The following cost estimate chart, Figure 8.1, uses expense figures from September 2009. Cost of labor, contractors, designers, equipment, and materials can and does change frequently, therefore a 25% contingency for increasing costs and unexpected engineering and construction fees is added to the estimate. All costs in the chart are outside contractor and commercial figures.

The Jefferson County Parks Department has a history of implementing master plans at a cost far below commercial figures by doing their own construction, partnering with other County departments and volunteer groups, and negotiating contracts with outside supplier.

The implementation options column suggests the party that will most likely build the element.

Figure 8.1	Dorothy Carnes County Park Implementation Chart				
	September 2, 2009				
Element	**Units**	**Quantity**	**Unit Cost**	**Total Cost***	**Implementation Options**
**Costs in this estimate assume commercial or contractor purchases. The Jefferson County Parks Department has histoically implemented construction projects at a greatly reduced cost.*					
Radloff Parcel					
Mowed Trail (4'wide)	sf	20,800	$0.33	$6,864.00	Parks Department
Boardwalk	sf	240	$25.00	$6,000.00	Parks Dept./Volunteers
Trail Signage		As Needed	Allotment		Commercial Purchase
Trail Signage Small	ea	10	$450.00	$4,500.00	Commercial Purchase
Trail Signage Large Interpretive	ea	5	$900.00	$4,500.00	Commercial Purchase
Viewing Blinds	ea	2	$8,500.00	$17,000.00	Parks Dept./Volunteers
Savanna Restoration	acre	9	$150.00	$1,350.00	Parks Dept./Volunteers
Prairie Restoration	acre	13	$100.00	$1,300.00	Parks Dept./Volunteers
Wetland Restoration	acre	2.75	$100.00	$275.00	Parks Dept./Volunteers
Park Maps	ea	1	$1,250.00	$1,250.00	Commercial Purchase
Interpretive Signs	ea	2	$2,500.00	$5,000.00	Contractor
Subtotal				**$48,039.00**	
25% Contingency				$12,009.75	
Subtotal				$60,048.75	
Preconstruction Fees and Permits				$6,004.88	
TOTAL RADLOFF PARCEL				**$66,053.63**	
Ward Parcel	**Units**	**Quantity**	**Unit Cost**	**Total Cost***	**Implementation Options**
Interpretive Signs	ea	5	$2,500.00	$12,500.00	Contractor
Marshside Viewing Deck	sf	240	$25.00	$6,000.00	Parks Dept./Contractor
Maintain Prairie Restoration	acre	29	$100.00	$2,900.00	Parks Department
Maintain Savanna Restoration	acre	29	$150.00	$4,350.00	Parks Department
Subtotal				**$25,750.00**	
25% Contingency				$6,437.50	
Subtotal				$32,187.50	
Preconstruction Fees and Permits				$3,218.75	
TOTAL WARD PARCEL				**$35,406.25**	

Historff Parcel	Units	Quantity	Unit Cost	Total Cost*	Implementation Options
5 Car Parking Lot - Gravel (1,500SF)					
Strip Topsoil	cy	55	$12.00	$660.00	Commercial Purchase
Grading	cy	100	$12.00	$1,200.00	Commercial Purchase
10" Agregate Base	sy	166	$10.00	$1,660.00	Commercial Purchase
Crushed Stone Surface	ton	30	$20.00	$600.00	Commercial Purchase
Spread Topsoil	cy	55	$2.00	$110.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	100	$0.75	$75.00	Commercial Purchase
Maintain Mowed Trails (4' wide)	sf	10,400	$0.33	$3,432.00	Parks Department
Park Maps	ea	1	$1,250.00	$1,250.00	Commercial Purchase
Trails Signage					Commercial Purchase
Trail Signage Small	ea	10	$450.00	$4,500.00	Commercial Purchase
Trail Signage Large Interpretive	ea	5	$900.00	$4,500.00	Commercial Purchase
Interpretive Signs	ea	5	$2,500.00	$12,500.00	Contractor
Maintain Prairie Restoration	acre	5.5	$100.00	$550.00	Parks Dept./Volunteers
Maintain Savanna Restoration	acre	12	$150.00	$1,800.00	Parks Dept./Volunteers
Subtotal				**$32,837.00**	
25% Contingency				$8,209.25	
Subtotal				$41,046.25	
Preconstruction Fees and Permits				$4,104.63	
TOTAL HISTORFF PARCEL				**$45,150.88**	

Hamer Parcel	**Units**	**Quantity**	**Unit Cost**	**Total Cost***	**Implementation Options**
5 Car Parking Lot - Gravel (1,500SF)					
Strip Topsoil	cy	55	$12.00	$660.00	Commercial Purchase
Grading	cy	100	$12.00	$1,200.00	Commercial Purchase
10" Agregate Base	sy	166	$10.00	$1,660.00	Commercial Purchase
Crushed Stone Surface	ton	30	$20.00	$600.00	Commercial Purchase
Spread Topsoil	cy	55	$2.00	$110.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	100	$0.75	$75.00	Commercial Purchase
Mowed Trails (4' wide)	sf	23,200	$0.33	$7,656.00	Parks Department
Park Map	ea	1	$1,250.00	$1,250.00	Commercial Purchase
Trail Signage		As Needed			Commercial Purchase
Trail Signage Small	ea	10	$450.00	$4,500.00	Commercial Purchase
Trail Signage Large Interpretive	ea	5	$900.00	$4,500.00	Commercial Purchase
Interpretive Signs	ea	3	$2,500.00	$7,500.00	Contractor
Large Viewing Blind with Seats	lump sum	1	$15,000.00	$15,000.00	Parks Dept./Volunteers
Maintain Prairie Restoration	acre	20	$100.00	$2,000.00	Parks Department
Savanna Restoration	acre	13.75	$150.00	$2,062.50	Parks Dept./Volunteers
Subtotal				**$48,773.50**	
25% Contingency				$12,193.38	
Subtotal				$60,966.88	
Preconstruction Fees and Permits				$6,096.69	
TOTAL HAMER PARCEL				**$67,063.56**	

Mason Farm	Units	Quantity	Unit Cost	Total Cost*	Implementation Options
Paved Park Drive (22' pavement, 18" shoulders) 3500 lf drive, 77,000 sf					
Strip Topsoil	cy	1,500	$2.00	$3,000.00	Commercial Purchase
Grading	cy	3,000	$4.00	$12,000.00	Commercial Purchase
10" Agregate Base	sy	8,600	$5.00	$43,000.00	Commercial Purchase
1-3/4" Binder Course	sy	8,600	$6.00	$51,600.00	Commercial Purchase
1-3/4" Surface Course	sy	8,600	$6.25	$53,750.00	Commercial Purchase
Crushed Stone Shoulder Dressing	ton	400	$10.00	$4,000.00	Commercial Purchase
Spread Topsoil	cy	1,500	$2.00	$3,000.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	18,000	$0.75	$13,500.00	Commercial Purchase
Bridge					
54" Culverts (2)	lf	80	$210.00	$16,800.00	Commercial Purchase
54" Culverts Apron End Section	ea	4	$3,000.00	$12,000.00	Commercial Purchase
Gravel Park Drive, 1500 lf					
Strip Topsoil	cy	645	$2.00	$1,290.00	Commercial Purchase
Grading	cy	3,000	$4.00	$12,000.00	Commercial Purchase
10" Agregate Base	sy	3,700	$5.00	$18,500.00	Commercial Purchase
Crushed Stone Surface	ton	600	$10.00	$6,000.00	Commercial Purchase
Spread Topsoil	cy	645	$2.00	$1,290.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	5,000	$0.75	$3,750.00	Commercial Purchase
Gravel Parking Lot, 1,500 sf					
Strip Topsoil	cy	55	$12.00	$660.00	Commercial Purchase
Grading	cy	100	$12.00	$1,200.00	Commercial Purchase
Crushed Aggregate Base (10")	ton	82	$20.00	$1,640.00	Commercial Purchase
Crushed Stone Surface	ton	30	$20.00	$600.00	Commercial Purchase
Spread Topsoil	cy	55	$2.00	$110.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	100	$0.75	$75.00	Commercial Purchase

Mason Farm (Continued)	Units	Quantity	Unit Cost	Total Cost*	Implementation Options
Mason Farmstead Parking Lots - Paved 15,000 sf					
Strip Topsoil	cy	300	$3.00	$900.00	Commercial Purchase
Grading	cy	600	$5.00	$3,000.00	Commercial Purchase
10" Agregate Base	sy	1,700	$6.00	$10,200.00	Commercial Purchase
1-3/4" Binder Course	sy	1,700	$6.50	$11,050.00	Commercial Purchase
1-3/4" Surface Course	sy	1,700	$7.00	$11,900.00	Commercial Purchase
Crushed Stone Shoulder Dressing	ton	20	$12.00	$240.00	Commercial Purchase
Spread Topsoil	cy	300	$2.00	$600.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	400	$0.75	$300.00	Commercial Purchase
Expand Hearty Gardens	lump sum	1	$5,000.00	$5,000.00	Parks Dept./Volunteers
Plans for Farmstead Buildings	lump sum	1	$10,000.00	$10,000.00	Contractor
Picnic Shelter	sf	800	25	$20,000.00	Contractor
Bicycle/Pedestrian Path - Hard Surface 8' wide, 9500 lf, 76,00 0sf					
Strip Topsoil	cy	1,400	$3.00	$4,200.00	Commercial Purchase
Grading	cy	1,400	$5.00	$7,000.00	Commercial Purchase
6" Agregate Base	sy	8,500	$4.00	$34,000.00	Commercial Purchase
1-3/4" Binder Course	sy	8,500	$6.50	$55,250.00	Commercial Purchase
1-3/4" Surface Course	sy	8,500	$7.00	$59,500.00	Commercial Purchase
Crushed Stone Shoulder Dressing	ton	80	$12.00	$960.00	Commercial Purchase
Spread Topsoil	cy	300	$2.00	$600.00	Commercial Purchase
Seed, Fertilize & Mulch	sy	400	$0.75	$300.00	Commercial Purchase
Mowed or Woodchip Trails 4' wide 20,400 LF, 81,600 SF, 4" Deep 26,928 CF	cy	1000	$15.00	$15,000.00	Parks Department
Marsh Magic Trail/Boardwalk 1,200 LF, 6' wide	sf	7200	$15.00	$108,000.00	Parks Department
Wildlife Viewing Blinds	ea	4	$8,500.00	$34,000.00	Parks Dept./Volunteers
Benches	ea	10	$1,200.00	$12,000.00	Parks Department
Marsh Overlook	ea	2	$8,500.00	$17,000.00	Parks Department
Bicycle Racks	ea	4	$850.00	$3,400.00	Commercial Purchase
Covered Overlook	sf	400	$25.00	$10,000.00	Parks Dept./Contractor
Small Shelter	sf	300	$25.00	$7,500.00	Parks Dept./Contractor
Restrooms	ea	4	$10,000.00	$40,000.00	Parks Dept./Contractor
Trailhead Kiosks	ea	3	$3,000.00	$9,000.00	Parks Dept./Contractor

Mason Farm (Continued)	**Units**	**Quantity**	**Unit Cost**	**Total Cost***	**Implementation Options**
Trail Signage		As Needed			Commercial Purchase
Trail Signage Small	ea	20	$450.00	$9,000.00	Commercial Purchase
Trail Signage Large Interpretive	ea	10	$900.00	$9,000.00	Commercial Purchase
Interpretive Signs	ea	5	$2,500.00	$12,500.00	Contractor
Fence Exits	ea	10	$1,200.00	$12,000.00	Parks Department
Maintain Prairie Restoration/Grasslands	acres	131	$100.00	$13,100.00	Parks Dept./Volunteers
Maintain Wetland Restoration/Scrape	acres	47	$100.00	$4,700.00	Parks Dept./Volunteers
Savanna Restoration	acres	45	$150.00	$6,750.00	Parks Dept./Volunteers
Subtotal				**$817,715.00**	
25% Contingency				$204,428.75	
Subtotal				$1,022,143.75	
Preconstruction Fees and Permits				$102,214.38	
TOTAL MASON FARM				**$1,124,358.13**	